Establishment and Monitoring of Experimental Grasslands on the Skagit Transmission Line Right-of-Way

FINAL REPORT

Prepared for:

City of Seattle
City Light Department
Transmission and Distribution Division

Prepared by:
Beak Consultants Incorporated

February 1989

19.

ESTABLISHMENT AND MONITORING of EXPERIMENTAL GRASSLANDS on the SKAGIT TRANSMISSION LINE RIGHT-OF-WAY

FINAL REPORT

Prepared For:

City of Seattle - City Light Department
Transmission and Distribution Division

Prepared By:

Beak Consultants Incorporated

February 1989
23031

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF FIGURES (continued)

LIST OF TABLES

1.0 INTRODUCTION

In 1983, the City of Seattle Light Department (City Light) issued Department Policy and Procedure 500 P 506 which addressed the maintenance of transmission line rights-of-way. Section 4.3 of the policy directed City Light to investigate, evaluate and where feasible, implement integrated vegetation management practices on its rights-of-way. In response to the policy, City Light contracted with Beak Consultants Incorporated in December 1984 to design and implement a demonstration study of the effectiveness of fertilized grasslands at suppressing the growth of danger trees. This is the final report of that study.

The control of tree growth is a primary concern among managers of powerline rights-of-way. Trees pose a serious threat to the operation of electrical powerlines when they grow into and/or fall onto the lines. Traditional methods of controlling tree growth beneath powerlines include manual and mechanical removal of trees, periodic burning of right-of-way vegetation and the use of selective herbicides. As traditional methods have proved to be costly and/or environmentally controversial, right-of-way managers have explored the use of various forms of "biological control" which rely on the natural plant processes to inhibit or control tree growth. One such form of biological control is the use of grassland vegetation, maintained artificially by fertilizing with nitrogen, to inhibit the establishment and early growth of tree seedlings. This report presents the results of a 4-year field study of the use of fertilized grasslands to control tree growth.

Dense communities of sod-forming grasses are known to inhibit tree growth through a number of different processes. First, dense grasses can intercept tree seeds and prevent them from reaching mineral soil. If suspended seeds germinate, they root in the mat of living and dead grasses where they are susceptible to desiccation during periods of summer drought. This is probably the principal manner by which sod-forming grasses inhibit the growth of small-seeded invader species such as red alder (Alnus rubra). Alder seeds carry little nourishment and are dependent on contact with

mineral soil for both nutrients and water (Kenady 1978).

The second process by which grassland communities inhibit tree growth is through competition for environmental resources, including light, water and nutrients. Tall grasses can shade tree seedlings for one or more years following germination and stunt or kill the young trees. Grasses also compete for soil moisture and have been known to cause significant decreases in the growth of trees at all stages from seedlings through maturity (Barrett 1979). Interspecific competition for nutrients is less documented, but it undoubtedly occurs when one or more nutrients are in short supply and are the limiting factor(s) to plant growth, as is the case for nitrogen in the forests of the Pacific Northwest. Finally, grassland vegetation can provide habitat for herbivorous mammals that eat seeds, shoots or leaves of young trees, thereby affecting trees through the sapling stage.

Taber and West (1984) first noted the competitive effects of fertilized grasslands in the western Cascades while monitoring a site that had been cleared, treated with municipal sludge and seeded with grasses. The site supported a vigorous grass community that resisted tree invasion for at least 15 years through a combination of plant competition and grazing by herbivores. The reports by Taber and West spawned interest by right-of-way managers in the Northwest and resulted in a number of follow-up studies. The first was a field trial of urea fertilizer at various application rates on a recently cleared right-of-way managed by the BPA (West 1987). It was found that fertilization of grass communities at rates between 200 and 400 pounds of nitrogen per acre produced dense grass turfs and suppressed tree seedling establishment. Suppression was complete for 5 years after fertilization with 400 pounds of nitrogen per acre on good growing sites (productive soils) but incomplete on less fertile sites. The poorer sites appeared to be incapable of supporting grass cover dense enough to suppress tree seedlings, even under heavy fertilization.

Encouraged by the preliminary results of the BPA study, Pacific Power and Light Company (PP&L) funded a field trial of nitrogen fertilization of existing grass and shrub communities beneath a powerline (Beak 1987). They

found increases in grass biomass and total above ground plant biomass after fertilization with nitrogen. Suppression of tree seedling establishment lasted at least 2 years.

The study presented in this report was begun concurrent with those of BPA and PP&L, but was designed to test different aspects of grassland ecology. While the BPA study (Taber and West 1984) showed significant suppression of seedling establishment, it was limited to several small (23 feet by 23 feet) plots where microsite conditions and irregularities of terrain could be controlled. The PP&L study (Beak 1987) involved entire spans of right-of-way, but was concerned with the effects of fertilizing established vegetation. Clearly, there was need for field trials of fertilization and seeding of recently cleared or disturbed sites, as are often found along powerline rights-of-way, complete with all the heterogeneous growing conditions typical of western Washington. This study was designed with that in mind.

The objectives of the study were: a) to determine the practical limitations of establishing grasslands on existing rights-of-way and b) to determine if grass seeding on a large area controls the growth of danger trees.

2.0 METHODS

2.1 The Study Sites

Two study sites were selected beneath the Skagit transmission line in northeastern Snohomish County (Figure 2.1). The sites were chosen to satisfy the following criteria:

1) study sites should be on land owned by City Light;

2) each study site should include at least three consecutive spans of the powerline (one span for a control, one span for a treatment and the middle span for a buffer);

3) slopes should not exceed 20 percent to facilitate mechanical site preparation; and

4) study sites should represent the range of soil moisture conditions present under the Skagit powerline, from seasonally saturated (wet) to excessively drained (dry).

Soil information for City-owned lands was reviewed to identify candidate sites. Subsequent field visits resulted in the selection of the two sites shown in Figure 2.1. The Dry Site meets all four selection criteria. The Wet Site does not meet the first criterion (it is not City-owned land), but permission to use the site was granted by the landowner (Scott Worldwide).

Both sites lie within the Tsuga heterophylla Physiographic Province (Franklin and Dyrness 1973). Mature forests of Douglas-fir (Pseudotsuga menziesii), western hemlock (Tsuga heterophylla), red alder and bigleaf maple (Acer macrophyllum) border the right-of-way and provide ample seed supplies for tree invasion. Soil texture is the primary distinction between the two sites.

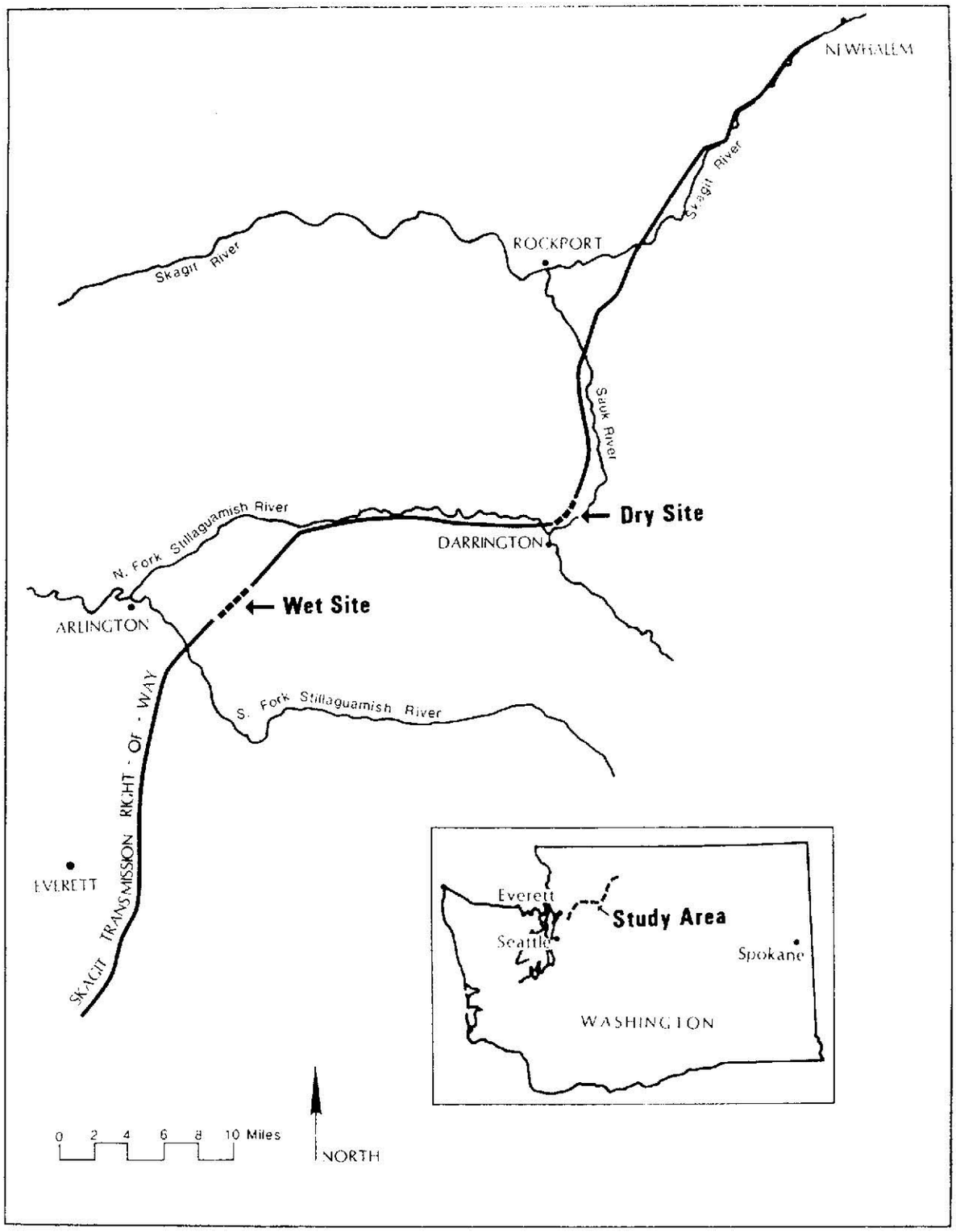

Figure 2.1 Locations of the Dry and Wet Study Sites along the Skagit Transmission Line in northeastern Snohomish County, Washington.

The Dry Site is on Greenwater loamy sand; a deep, course, excessively drained soil on which plant growth is limited by seasonal drought. Douglas-fir is the dominant tree species on and adjacent to the site. Alder is scarce because of the lack of soil moisture. The Dry Site was seeded with grasses and grazed prior to the onset of this study, and there was some indication that grazing continued at least through 1985. The site was dominated by a well-established community of sod-forming grasses, ferns, forbs and shrubs prior to experimental treatment. Exposed soil existed only at extremely harsh (dry) microsites or disturbed areas (i.e., motorcycle ruts) where blow-outs of the sandy soil appeared. The site is level to gently sloping, with the exception of a steep drop of about 60 percent at the south end of the site.

Soils at the Wet Site are predominantly Tokul gravelly loam. These are deep, moderately well-drained soils with localized shallow hardpan that results in seasonal saturation at or near the surface. The site is on a side slope of 5 to 20 percent with very irregular terrain. Douglas-fir, western hemlock, red alder, bigleaf maple and western red cedar (Thuja plicata) are abundant in the adjacent forest and all but Douglas-fir were present as invaders on the right-of-way at the onset of the study. The Wet Site supports a dense shrub community dominated by salal (Gaultheria shallon), salmonberry and blackberry (Rubus spp.). The Wet Site was relatively undisturbed, except for right-of-way management activity, at the onset of the study.

Each study site consisted of two spans of right-of-way (Figure 2.2). One span was subjected to clearing, seeding and fertilization (Treatment) while the other was left untreated (Control). The treatment and control spans were separated by at least one additional untreated span as a buffer. Spans averaged 1,000 feet long and 250 feet wide and all had an access road down the center.

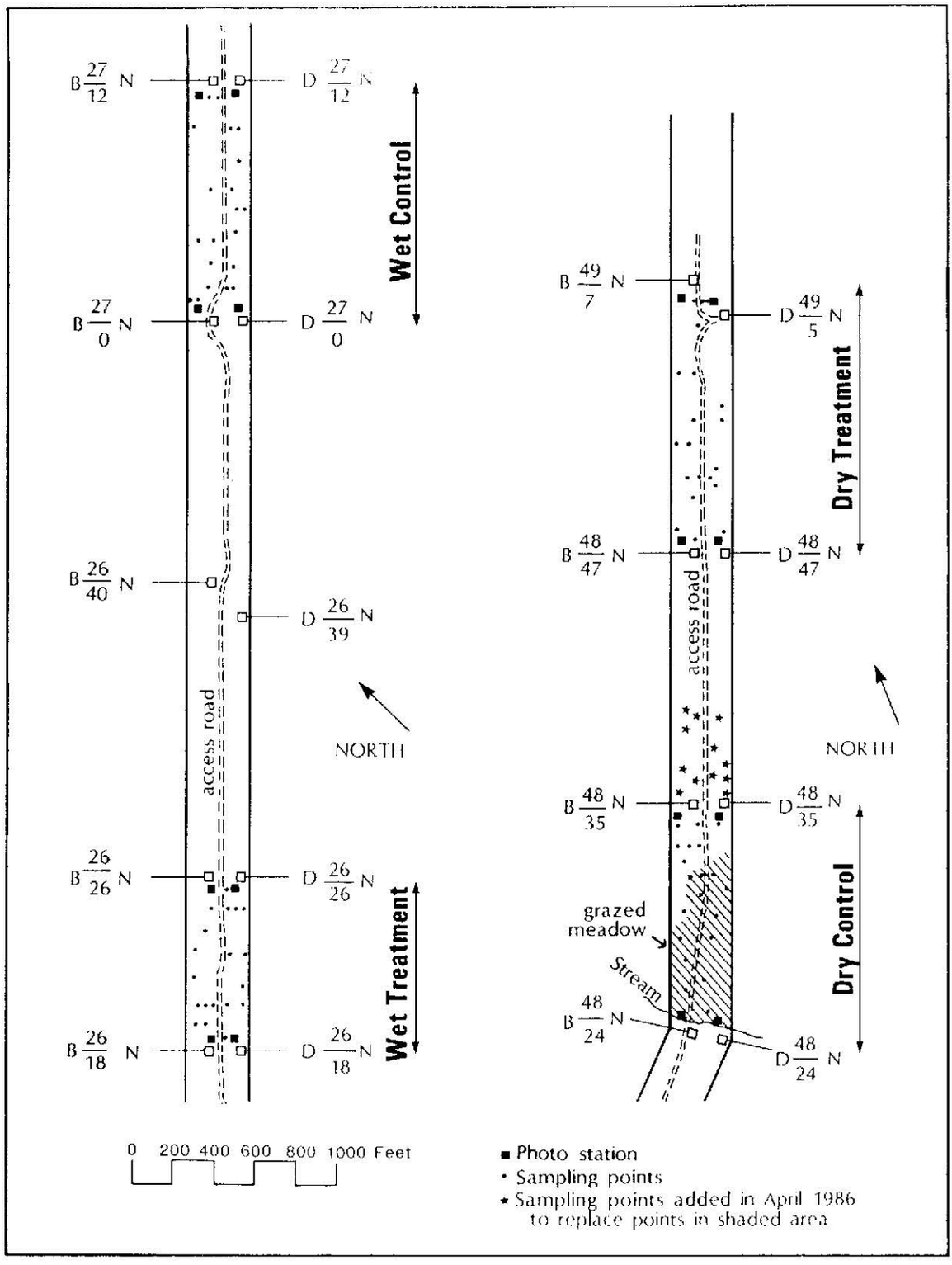

Figure 2.2 The Dry and Wet Study Sites selected along the Skagit Transmission Line, showing randomly selected sampling points and photo stations.

2.2 Experimental Treatments

The two Treatment Spans were prepared for seeding from 28 April to 2 May 1985. On the Dry Treatment, a heavy sod layer was scarified and worked with a Caterpillar D-7 bulldozer equipped with a brush blade. The sod was turned over but not piled or removed from the site. Following this, the span was seeded by hand with a mixture of grasses and forbs (Table 2.1) at a rate of 25 to 30 pounds per acre. Approximately 5.5 acres were treated at the Dry Site.

Scarification of the Wet Treatment was more difficult because of saturated soils, steeper slopes and greater amounts of brush. The site was scarified with the same bulldozer, but several springs and gullies were missed and were not prepared for seeding. The existing vegetation, largely salmonberry, was piled in windrows and the site was seeded with the same mixture and rate as the Dry Treatment. Roughly 4 acres were scarified and seeded at the Wet Site. Both Treatment Spans were fertilized with urea (46-0-0) at a rate of 900 pounds per acre in early June 1985. An all terrain vehicle with a front mounted hopper/spreader was used.

Western Washington entered a summer of drought shortly after the fertilizer was applied in 1985. Total precipitation between 1 May and 31 August was only 6.95 inches at Concrete, Washington. More importantly, it did not rain at all during July. The effect of the July drought on the Treatment Spans was significant. Visual inspection of the sites showed very poor germination of seed and limited survival of plants that did germinate. Grass production was far below all expectations. As a result, it was determined that both Wet and Dry Treatment Spans should be re-seeded in the fall of 1985. The spans were seeded with the original mixture on 28 and 29 October 1985, at a rate of 25 to 30 pounds per acre.

Mulch was placed on part of the Dry Treatment at the time of the fall seeding in an attempt to improve soil moisture conditions. Silva fiber wood mulch was spread at a rate of 3,500 pounds per acre over an area measuring approximately 100 feet by 75 feet. The mulch strip was positioned

Table 2.1. Seed mixture applied to Treatment Spans on the Skagit Grassland Study in the spring and fall of 1985.

Species	Rates (lbs/ac)
Perennial ryegrass (Lolium perenne)	6.5 - 7.8
Annual ryegrass (Lolium multiflorum)	6.5 - 7.8
Alta tall fescue (Festuca arundinaceae)	4.0 - 4.8
Creeping red fescue (Festuca rubra)	2.0 - 2.4
Birdsfoot trefoil (Lotus corniculatus)	6.0 - 7.2
Total	25.0 - 30.0

so as to incorporate as many different microsite conditions as possible. A chronology of site preparation and treatment is presented in Table 2.2.

2.3 Data Collection

2.3.1 Sampling Points

Immediately following site preparation and seeding, 20 permanent sampling points were randomly located in each of the treatment and control spans and marked with metal stakes (Figure 2.2). Data were collected at these initial 80 sampling points in 1985. By the spring of 1986 it became apparent that 12 of the 20 sampling points at the Dry Control were not representative of average conditions at the Dry Site because they were placed in a low-lying wet area at the south end of the site (Figure 2.2). These 12 sampling points were randomly re-located in the drier portion of the span in April 1986. Two new sampling points were also added in April 1986 in the experimental mulch plot established in the Dry Treatment the previous fall. The 82 sampling points established by April 1986 were used for the remainder of the study. Marker stakes were frequently stolen between sampling visits, but it was usually possible to relocate sampling points from field notes and signs of previous vegetation clipping. Sampling was done at all points in April and September of 1985, 1986 and 1987 and August of 1988 (Table 2.2).

2.3.2 Vegetative Production

Above-ground biomass production was measured at each sampling point by clipping all green and dead non-woody vegetation in a 1.0-meter by 0.5-meter rectangular frame placed 2.5 meters from the marker stake. Frames were placed in different compass directions from the stakes in each sampling period to avoid clipping the same spot twice. Vegetation was separated by plant group (grass, forb or fern), bagged, labelled and returned to the laboratory where it was dried for 72 hours in a convection oven. Dried samples were weighed to the nearest 0.1 gram on a triple beam balance.

Table 2.2 Experimental treatment and monitoring chronology for the Skagit Grassland Study.

ACTIVITY	DATES
Site Preparation and Seeding; Dry Site	29-30 April 1985
Site Preparation and Seeding; Wet Site	1-2 May 1985
Fertilization; Dry Site	4 June 1985
Fertilization; Wet Site	12 June 1985
Re-seeding and Mulch Application; Dry Site	28 October 1985
Re-seeding; Wet Site	29 October 1985
Vegetation Monitoring	29 April - 2 May 1985 9-11 September 1985 22-23 April 1986 9-10 September 1986 23-24 April 1987 9-11 September 1987 29-30 August 1988

2.3.3 Species Composition

- Tree Seedlings

  A circular plot (2.5 meter radius, 19.63 meters^2, .002 ha) was centered at each sampling point stake to sample hazard species. Height of all tree seedlings within this plot was measured to the nearest foot.

- Shrubs

  A circular plot (1.0 meter radius, 3.14 meters^2, .0003 ha) was centered at each sampling point stake to sample shrubs. Percent ground cover of shrubs was measured by ocular estimation for each shrub species within each circular plot.

- Herbs

  The herbaceous component of the community was sampled by randomly locating two 0.2-meter by 0.5-meter plot frames at 2.5 to 6.0 meters from each point stake. Herbaceous cover within the plot frame was estimated by species using visual estimation techniques described by Daubenmire (1968), and modified slightly by BEAK to avoid over estimation of species with very low cover (Table 2.3).

2.3.3 Photographic Documentation

Four photodocumentation stations were established on each site, one at each corner (Figure 2.2). Photographs were taken at each station during each sampling period, as well as at random locations on the right-of-way to document activities and points of interest.

2.4 Statistical Analysis

The Skagit Grassland Study is, by design, a field demonstration (measurement design) rather than a true experiment. The major distinction between the two is that the demonstration is not replicated. With field studies of this size replication is expensive, and probably not necessary to

Table 2.3. Herbaceous cover classes used by BEAK in data collection for the Skagit Grassland Study compared to similar classes developed by Daubenmire (1968).

Daubenmire		BEAK	
Class	% Cover	Class	% Cover
1	<5	+	<1
2	5-25	1	1-5
3	25-50	2	5-25
4	50-75	3	25-50
5	75-95	4	50-75
6	95-100	5	75-95
		6	95-100

adequately assess the main effect (dense grass) which is expected to be large. This is a common problem encountered in ecological field studies (Bohn and Buckhouse 1985, Hurlbert 1984). To compensate for lack of replication, we selected two areas that represent a range of environmental conditions (from wet to dry). Our assumption was that results obtained here could be applied elsewhere as long as conditions fall within the range defined by the Wet and Dry Sites. The only drawback to not having replication is that we are unable to define confidence limits to assess the accuracy of our results. This is an acceptable situation as long as we remember that future results on other areas may vary from those observed here.

Data were analyzed in the following way:

1) data were averaged for the 20 sample points in each span for each sampling period;

2) data for sampling periods were compared graphically to identify trends over time within spans; and

3) differences between treatment and control spans were compared statistically to identify treatment effects. Any change seen in Treatment Spans that was not accompanied by a similar change in the respective control was considered to be a treatment effect (unless qualitative examination of the data indicated otherwise). Treatment effects could be either positive or negative. Two-tailed t-tests were performed on biomass comparisons between treatment and control spans, with a significance level of 0.05.

Power analyses were conducted for biomass and tree density data to determine whether the sample size of 20 would result in enough precision to detect reasonable differences. Power analysis determines the probability of rejecting the null hypothesis at different magnitudes of difference between the means.

The results of the power analyses are presented in Figures 2.3 and 2.4. A minimum difference of 24.6 g/0.5m^2 in grass biomass (109 percent of mean grass production for all sites) will be detected 80 percent of the time with the sample size of 20. If the sample size were reduced to 10 points a difference of 34.9 g/0.5m^2 (154 percent of mean production), would be detected 80 percent of the time. If the sample size were increased to 50 points, a difference of 15.6 g/0.5m^2 (69 percent of mean production) would be detected 80 percent of the time.

With the sample size of 20 points, minimum difference of 72.4 g/0.5m^2 in total biomass (100 percent of mean production) will be detected 80 percent of the time (Figure 2.3). Changing the sample size to 10 and 50 points would change detectable differences to 102.5 g/0.5m^2 (141 percent of mean production) and 45.8 g/0.5m^2 (63 percent of mean production), respectively.

Based on the results of other studies (Beak 1987) the increase in biomass production after heavy nitrogen fertilization was expected to be well in excess of 100 percent. Therefore, the sample size of 20 points was considered adequate to detect the expected increase in biomass production.

Power curves for tree density data are presented in Figure 2.4. With a sample size of 20, a minimum difference of 142 stems per acre in conifer density (242 percent) and 311 stems per acre in hardwood density (275 percent) will be detected 80 percent of the time. Decreasing the sample size to 10 points would increase the minimum detectable difference to 200 stems per acre for conifer density (337 percent) and 441 stems per acre for hardwood density (389 percent). Increasing the sample size to 50 points would decrease the minimum detectable difference to 91 stems per acre for conifer density (153 percent) and 198 stems per acre for hardwood density (175 percent).

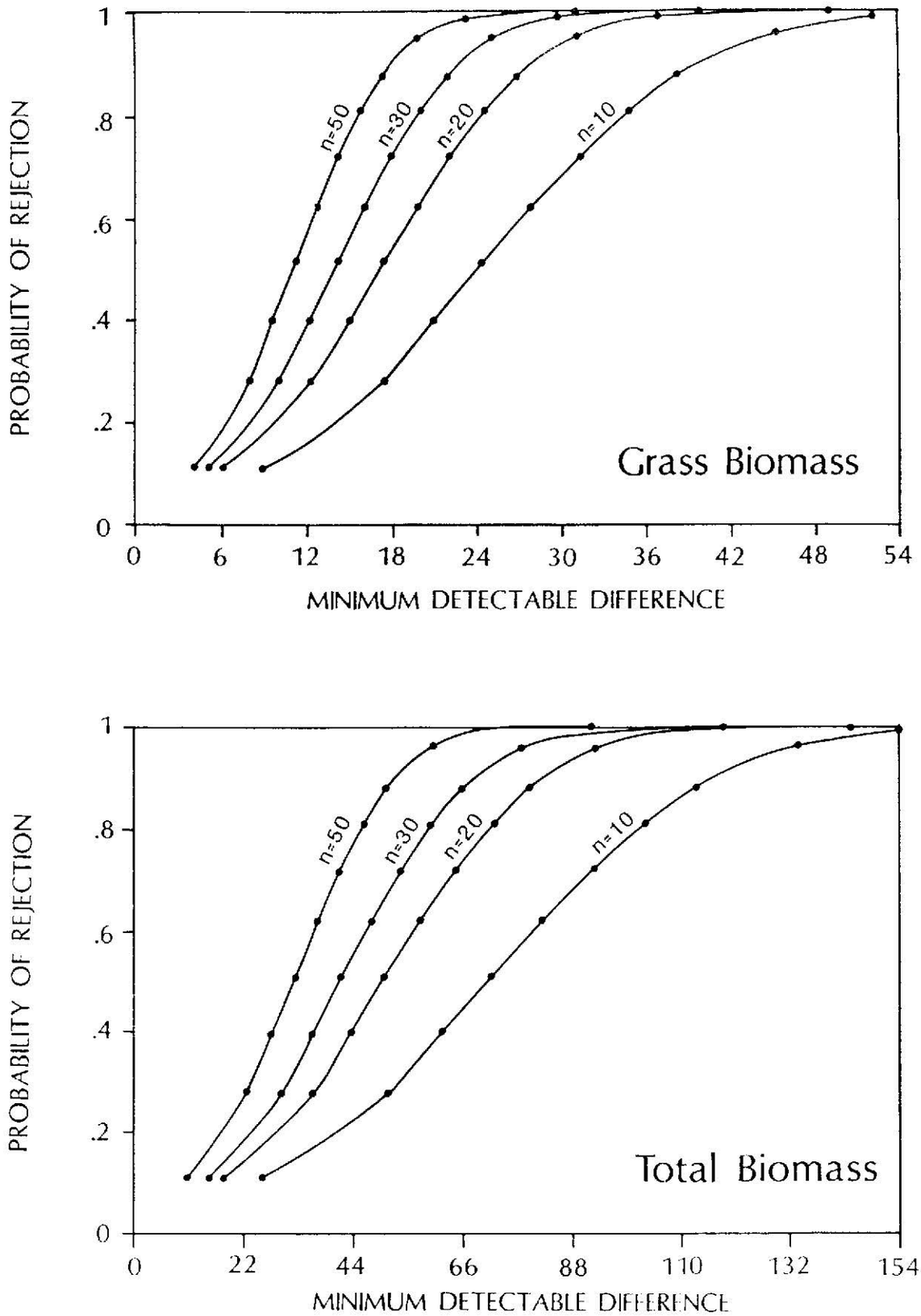

Figure 2.3 Grass biomass and total biomass power curves, using data colleceted at the Skagit Grassland Study in 1985.

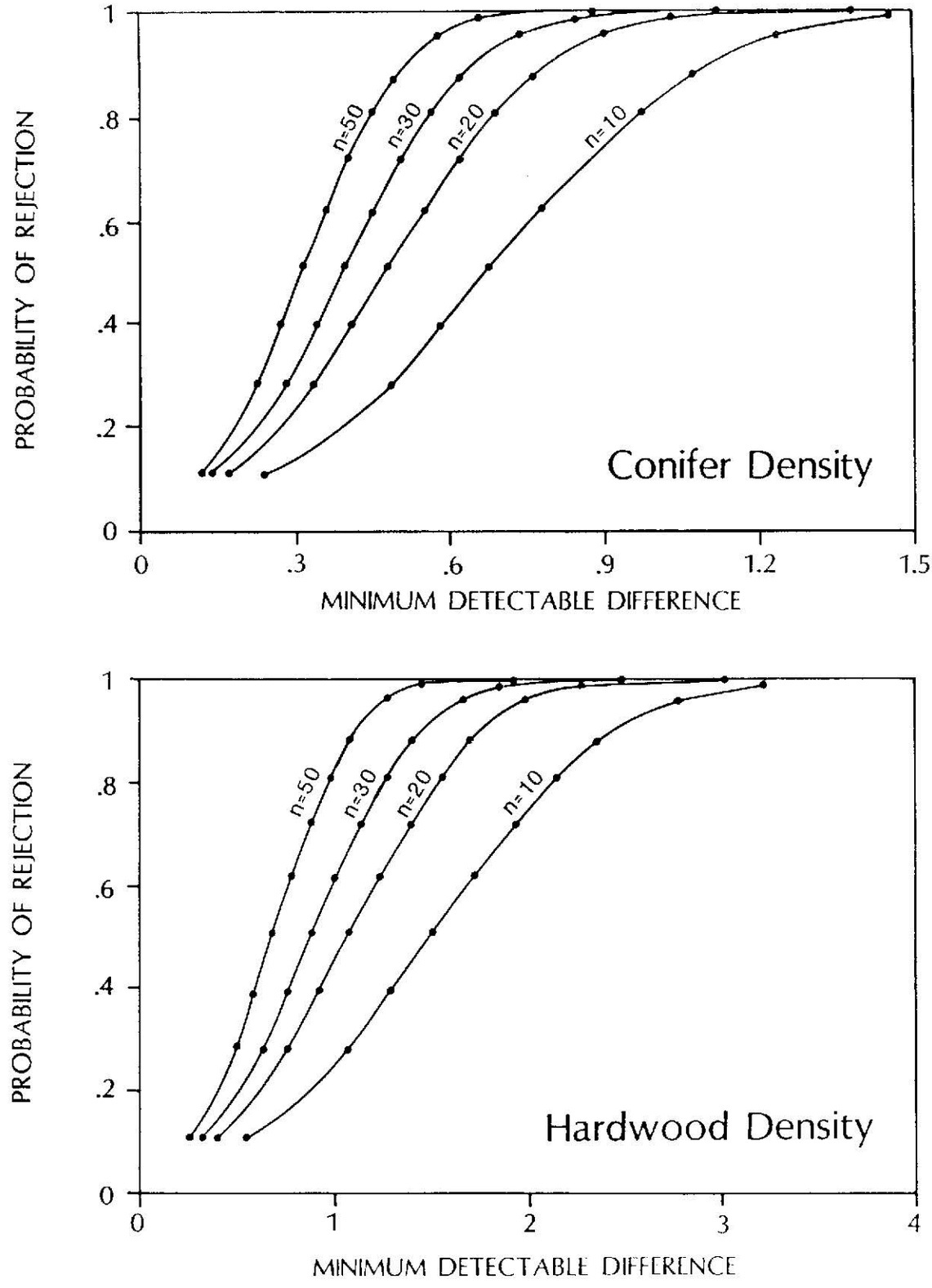

Figure 2.4 Conifer density and hardwood density power curves, using data collecteted at the Skagit Grassland Study in 1985.

An index of the cost effectiveness of a certain sampling intensity is the absolute distance between the power curves for different sample sizes. Examination of Figures 2.3 and 2.4 shows that 20 is the most cost effective sample size. That is, an increase from 10 to 20 samples yields considerable improvement in power, whereas an increase from 20 to 30 samples yields relatively less improvement. A sample of 20 points per site should be adequate to detect the expected increase in biomass due to the treatment and the subsequent inhibition of danger tree establishment.

3.0 RESULTS

3.1 Implementation Costs

Site preparation at the two Treatment Spans (approximately 5.5 acres at the Dry Site and 4 acres at the Wet Site) required roughly 24 hours of tractor (D-7 Caterpillar) time and cost approximately $110 per acre (in 1985 dollars). This is probably a high cost estimate for site preparation because much of the time was spent making blade changes and experimenting with different preparation techniques. Progress was also slowed on the Wet Treatment Span by saturated soils, a situation that could be avoided by doing site preparation work in the late summer or fall. Taking all of these factors into consideration, it is estimated that site preparation on a large scale project would average about $110 per acre and proceed at a rate of 5 to 8 acres per tractor day. Seeding of the Treatment Spans (both Wet and Dry) was accomplished at a total cost of $734, or $77 per acre.

Total cost for fertilization of the Wet and Dry Treatment Spans was $3,713 ($390 per acre), which included labor, equipment and fertilizer costs. Fertilization of the Treatment Spans was complicated by rainfall. Urea has a tendency to dissolve when it gets wet, and the dissolved urea becomes sticky and is difficult to spread. This added to the cost of fertilization and made uniform application difficult.

3.2 Vegetative Production

Average above-ground biomass was computed for both treatment and control spans in all sampling periods (Table 3.1). Significant differences between treatment and control values were detected in several instances. When the biomass data were plotted over time (Figures 3.1 through 3.4), two general trends emerged. First, total biomass was not significantly increased by the treatment. In only one instance was total biomass significantly greater on a Treatment Span than on the respective control. This occurred on the Dry Site in September 1987, but it appears to be more the result of low biomass production on the control than increased

Table 3.1 Average above-ground biomass on the Skagit Powerline Experimental Grassland Study spans.

DATE	Biomass (grams/0.5m2)															
	GRASSES				FERNS				FORBS				TOTAL			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
April 1985	8.3	0.2	46.2	1.4*	126.4	0.6*	30.3	0.5*	3.2	0.1	6.4	0.4	138.0	0.9*	82.9	2.3*
Sept 1985	9.8	37.9*	68.0	11.6*	140.7	6.5*	11.6	14.8*	9.1	8.2	32.6	7.9*	159.6	52.6*	112.2	34.3*
April 1986	4.6	49.1*	42.9	30.6	111.3	2.8*	39.4	17.1*	9.4	9.1	6.0	10.8*	125.7	61.0	82.0	58.2
Sept 1986	1.0	112.0*	24.7	55.4*	182.3	1.9*	67.1	21.3*	3.2	23.0*	16.4	12.8	186.7	131.1	108.3	89.5
April 1987	7.5	90.2*	18.3	61.3*	215.1	1.3*	34.6	31.9*	3.2	6.5	10.9	7.0	225.8	97.9*	59.1	100.3*
Sept 1987	4.8	138.1*	21.5	71.5*	96.2	8.8*	52.4	18.2*	13.0	32.0*	16.5	9.2*	114.0	146.8	90.4	98.2
Aug 1988	22.0	157.9*	20.7	67.2*	210.0	71.5*	89.2	42.5*	36.6	84.0*	18.7	13.7	195.3	249.0	124.2	116.4

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

* Indicates a difference between treatment and control at the 0.05 level of significance for two-tailed t-tests.

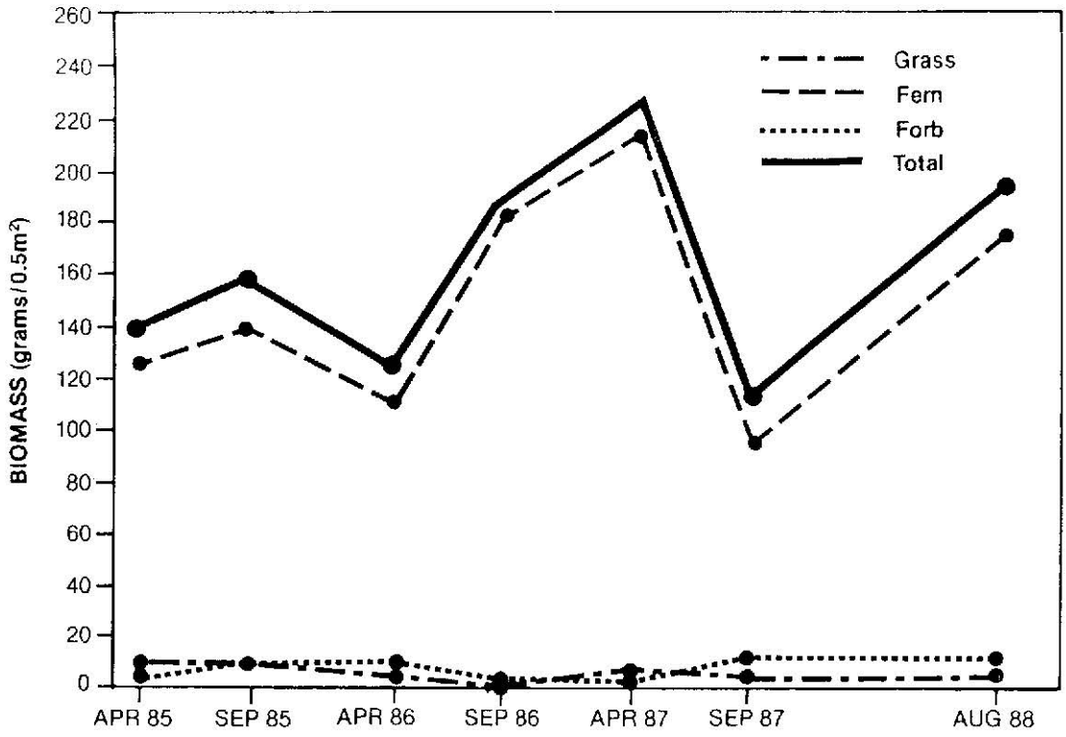

Figure 3.1 Trends in average above-ground biomass on the Wet Control Span.

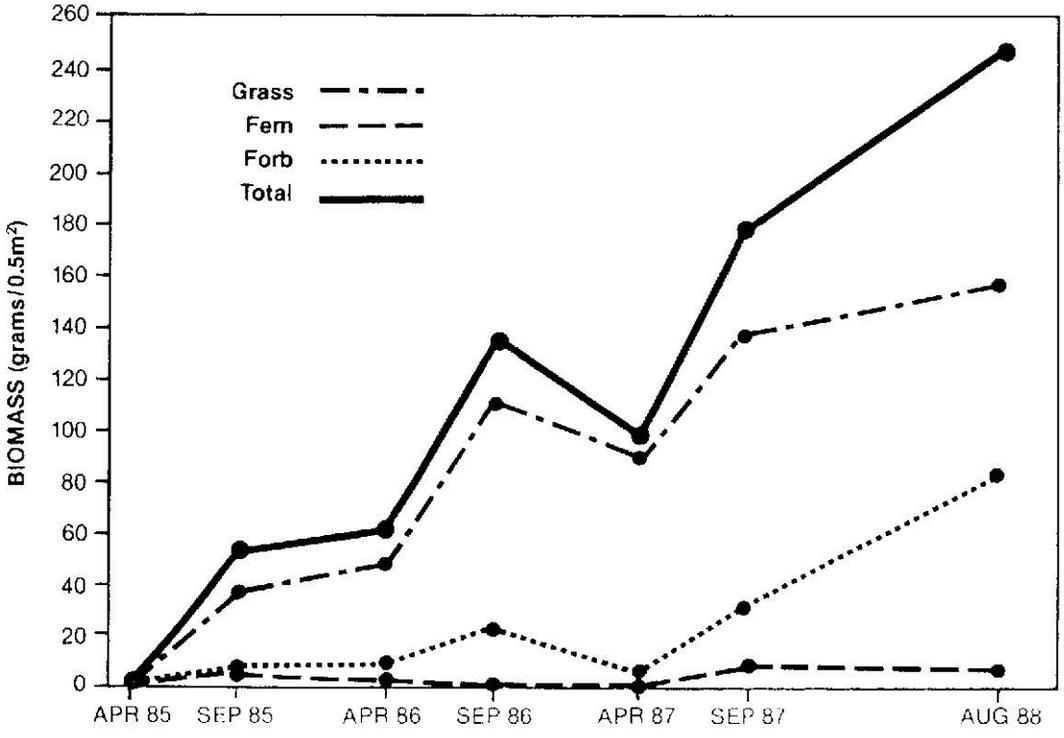

Figure 3.2 Trends in average above-ground biomass on the Wet Treatment Span.

Figure 3.3

and

Figure 3.4

production on the treatment. Total biomass was significantly less on both Treatment Spans in April and September 1985, most likely because of the extensive vegetation removal involved with the treatment. By April 1986, treatment and control values for total biomass were comparable at both sites; a trend that continued through August 1988.

The second major trend was that grasses replaced ferns on the Treatment Spans. This trend was more pronounced at the Wet Site, where the Wet Treatment Span had significantly less fern biomass that the Wet Control in all sampling periods, and significantly more grass biomass in all sampling periods except the first period following treatment (April 1985). A similar but less consistent trend was observed at the Dry Site. Grass biomass on the Dry Treatment Span did not exceed that on the Dry Control until September 1986. The difference in fern biomass was erratic on the Dry Site, but in general the Dry Treatment Span has less fern than the Dry Control.

Forb biomass showed no clear trends; it was generally low in all sampling periods and unpredictably variable between the treatment and control spans.

3.3 Grasses and Forbs

Grass coverage increased on both Treatment Spans, but it never exceeded 66 percent on either (Table 3.2). Total coverage (grasses and forbs combined) was also greater on Treatment Spans than on controls, but it never reached 100 percent on any span. Trends in coverage over time were variable. The Wet Control was relatively constant for both grass and total coverage while the Wet Treatment showed a peak in grass coverage in April 1987 and a continued rise in total coverage through August 1988 (Figure 3.5). The Dry Control had a general decrease in grass and total coverage throughout the study, with a low point in September 1986 (Figure 3.6). The Dry Treatment displayed increases in grass and total coverage throughout the study.

Table 3.2 Coverage of grasses and forbs on the Skagit Powerline Experimental Grasslands Study spans. (Total values represent grasses and forbs combined).

	Percent Coverage							
Sampling Period	Wet Control		Wet Treatment		Dry Control		Dry Treatment	
	Grass	Total	Grass	Total	Grass	Total	Grass	Total
Apr. 1985	5.1	12.4	0.0	1.2	53.0	56.7	0.0	0.0
Sep. 1985	9.6	20.6	35.6	55.3	51.0	93.9	14.2	24.4
Apr. 1986	5.6	10.0	51.8	69.0	32.5	44.2	29.8	46.3
Sep. 1986	8.7	18.4	53.6	86.5	18.5	27.3	40.6	47.2
Apr. 1987	2.4	7.9	65.7	77.0	24.1	40.0	55.6	63.2
Sep. 1987	4.3	9.9	49.3	81.1	33.9	47.9	59.7	67.2
Aug. 1988	4.6	10.1	52.7	92.3	26.4	35.4	58.3	62.4

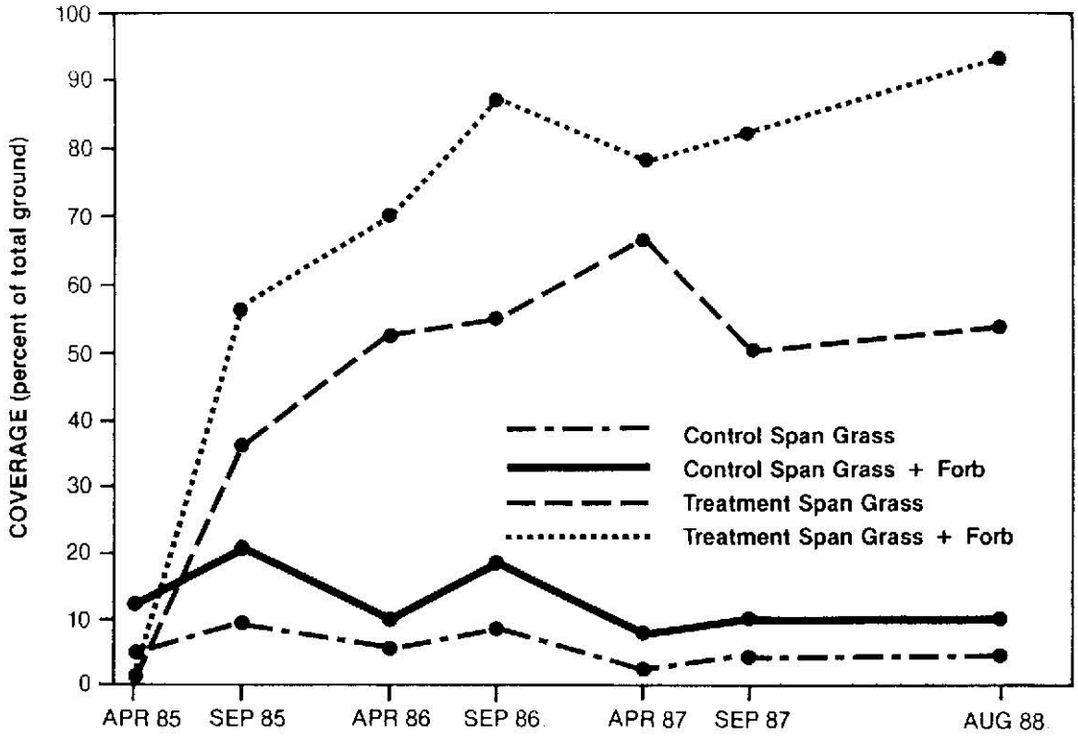

Figure 3.5 Trends in coverage of grasses and forbs at the Wet Site.

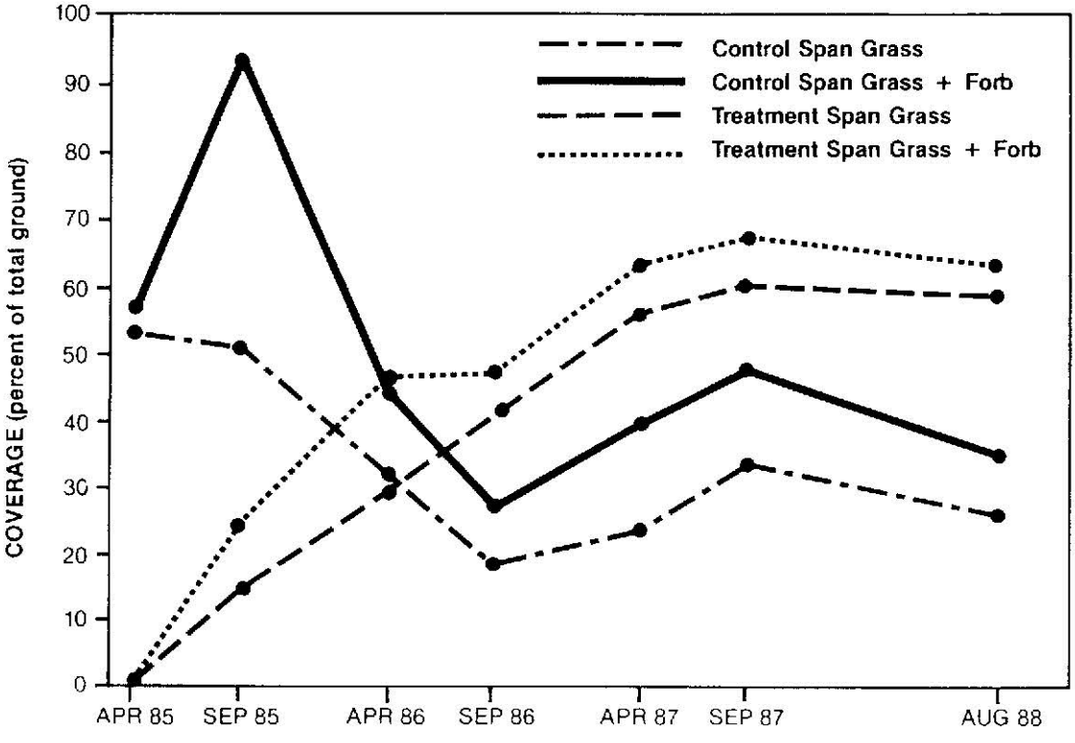

Figure 3.6 Trends in coverage of grasses and forbs at the Dry Site.

Diversity indices were calculated for the grass/forb component according to the Shannon-Weiner Information Formula (Wilson and Bossert 1971; Table 3.3, Figure 3.7). Diversity was high on both Treatment Spans in September 1985, but decreased steadily throughout the study as grass biomass and grass coverage increased. Diversity on the control spans was relatively constant throughout the study, except for slightly lower values on the Dry Control in 1985, possibly because of the drought.

3.4 Shrubs

The density of shrubs was greatly reduced throughout the study as a result of treatment. Shrub canopy coverage on the Treatment Spans was less than on controls in all sampling periods (Table 3.4), and it showed little increase over time (Figure 3.8). An interesting trend in the shrub coverage data was the strong seasonal cycle for the control spans. Deciduous shrub species (e.g., Rubus spp.) dominated both spans, resulting in shrub canopy coverage that was consistently low in spring and high in summer.

3.5 Seedling Establishment

The experimental treatment reduced the number of tree seedlings on the right-of-way, but it did not eliminate them completely and the reduction was clearly diminished by August 1988 (Table 3.5, Figures 3.9 through 3.12). Both Treatment Spans experienced initial reductions in densities of all tree species as a result of site preparation. Seedling densities remained low throughout the study on the Dry Treatment Span, but the effect of treatment was not lasting on the Wet Treatment. The number of tree seedlings remained low on the Wet Treatment until September 1986, at which time the number of willow (Salix spp.) seedlings had increased from zero to 142 trees per acre (Appendix D). By August 1988, the number of alder seedlings on the Wet Treatment Span had increased to 668 trees per acre; higher than on either of the controls at any point in the study. Seedling density decreased on the Wet Control between September 1987 and August 1988 because of routine maintenance clearing that was required to control alder in late 1987.

Table 3.3 Diversity indices for the Skagit Experimental Grassland Study.

	Shannon-Weiner Diversity Index			
Sampling Period	Wet Control	Wet Treatment	Dry Control	Dry Treatment
Apr. 85	2.57	0.69	1.12	1.93
Sep. 85	2.27	1.72	1.24	2.27
Apr. 86	2.32	1.26	1.89	1.79
Sep. 86	2.27	1.17	2.03	1.22
Apr. 87	1.64	1.35	1.77	0.91
Sep. 87	2.54	0.99	1.65	0.94
Aug. 88	1.85	0.96	1.75	0.64

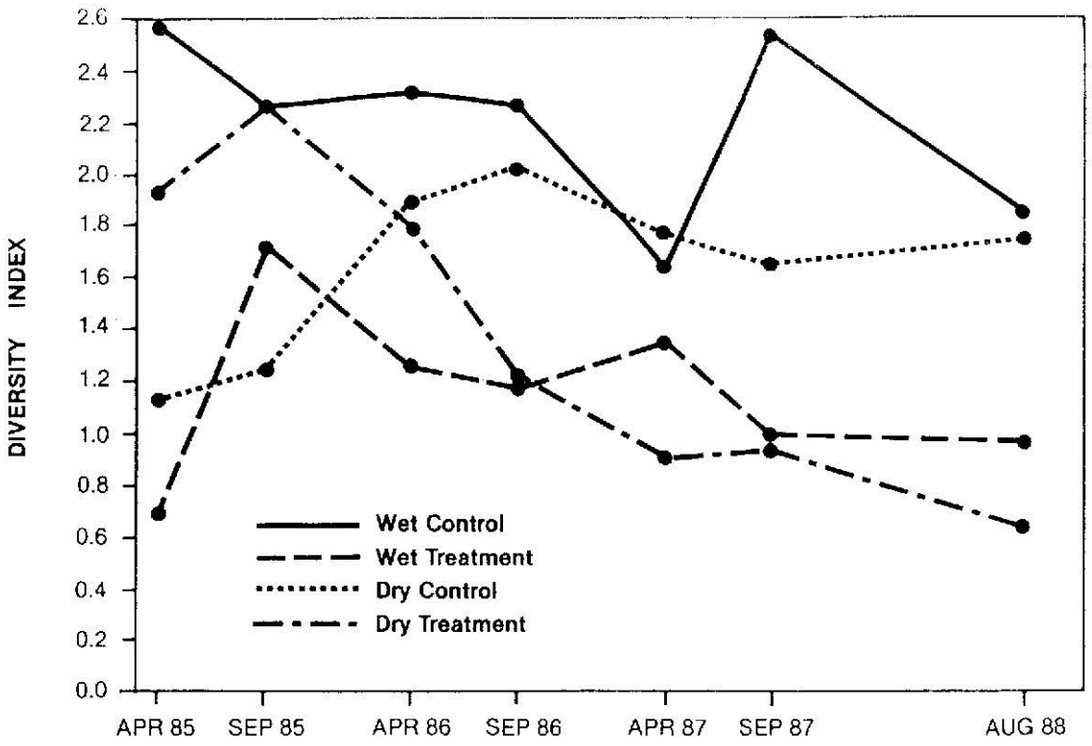

Figure 3.7 Trends in plant species diversity as measured by the Shannon-Weiner diversity index.

Table 3.4 Coverage of shrubs on the Skagit Powerline Experimental Grassland Study spans.

	Average Shrub Coverage (percent)			
Sampling Period	Wet Control	Wet Treatment	Dry Control	Dry Treatment
Apr. 85	41.45	0.70	16.15	0.40
Sep. 85	90.19	21.00	33.75	5.25
Apr. 86	52.60	15.25	18.60	4.35
Sep. 86	85.00	21.60	35.35	10.35
Apr. 87	60.25	21.25	26.75	9.80
Sep. 87	72.78	24.75	41.03	18.08
Aug. 88	67.18	19.96	35.05	9.90

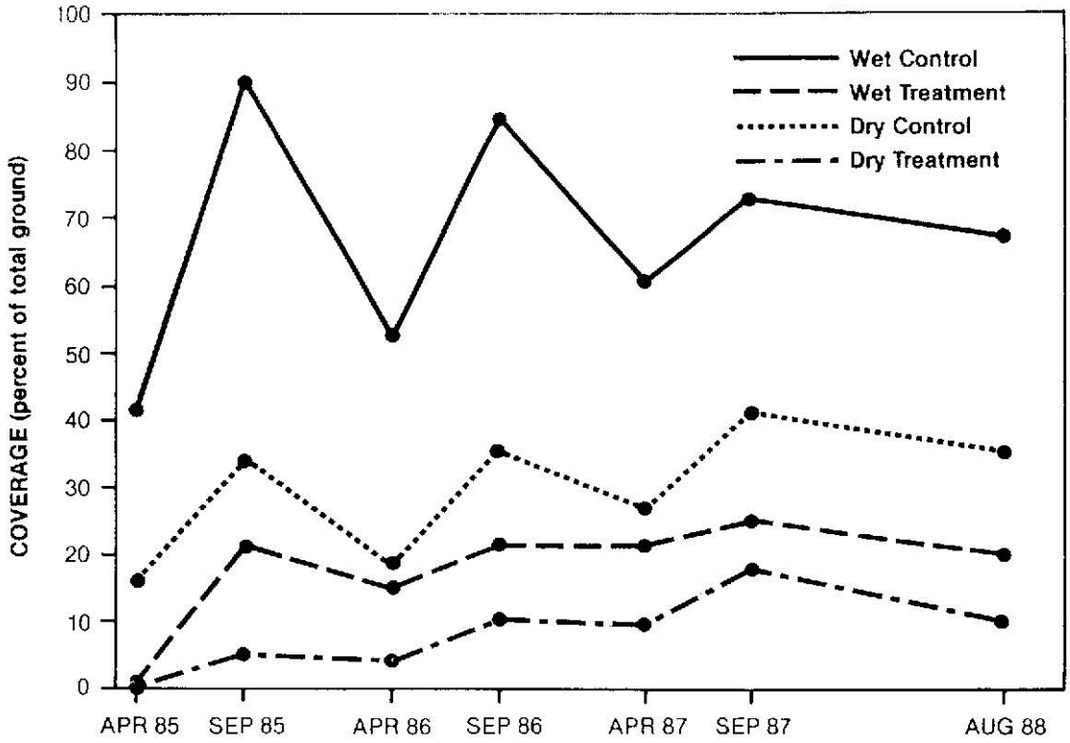

Figure 3.8 Trends in coverage by shrubs.

Table 3.5 Densities of tree seedings on the Skagit Powerline Experimental Grassland Study spans.

	Density (trees/acre)							
Sampling Period	Wet Control		Wet Treatment		Dry Control		Dry Treatment	
	Alder	All Sp.	Alder	All Sp.	Alder	All Sp.	Alder	All Sp.
Apr. 85	385	423	41	62	41	319	0	82
Sep. 85	340	402	41	41	0	93	0	21
Apr. 86	278	319	41	41	10	227	0	21
Sep. 86	371	423	31	216	31	247	0	10
Apr. 87	392	484	41	216	31	247	0	31
Sep. 87	423	526	680	732	10	258	0	52
Aug. 88	155[1]	289[1]	1,443	1,577	0	237	10	103

[1] The Wet Control span received manual removal of alder seedlings between September 1987 and September 1988.

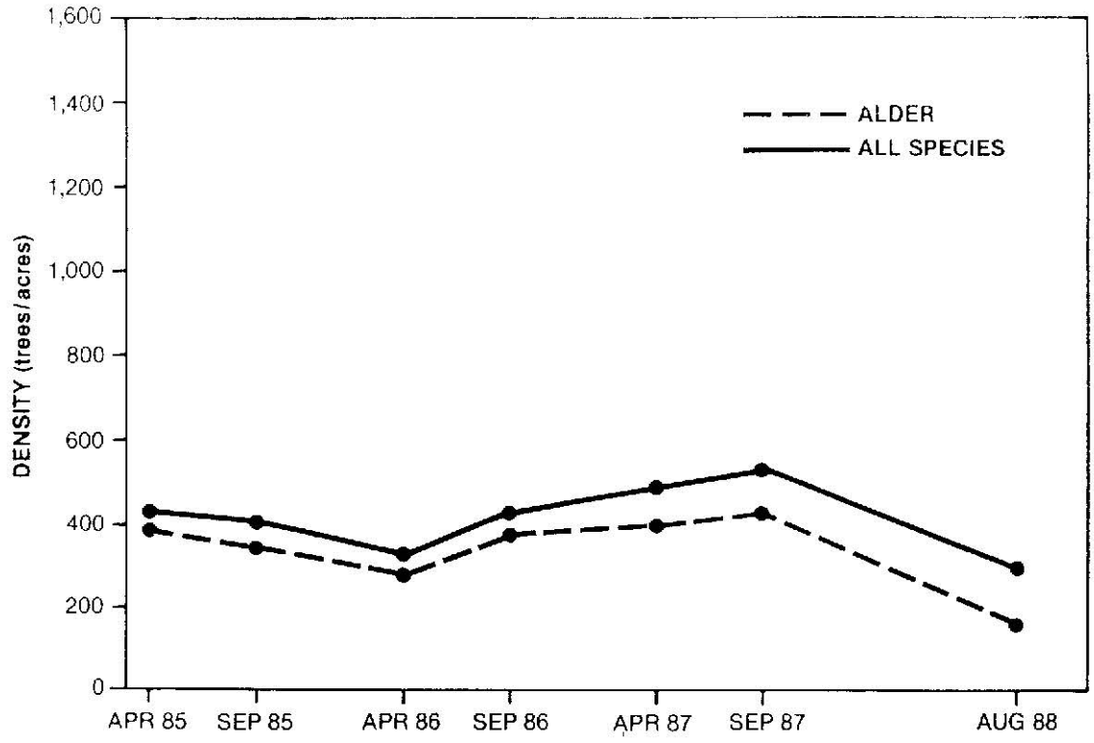

Figure 3.9 Trends in tree seedling density on the Wet Control span.

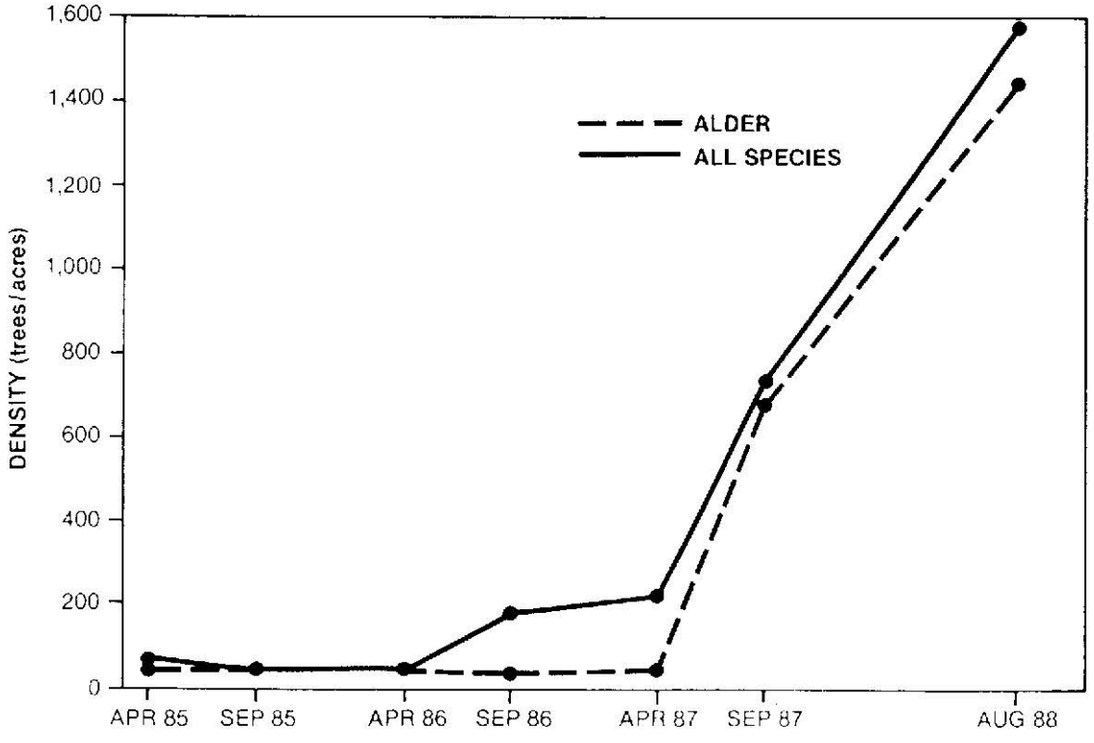

Figure 3.10 Trends in tree seedling density on the Wet Treatment span.

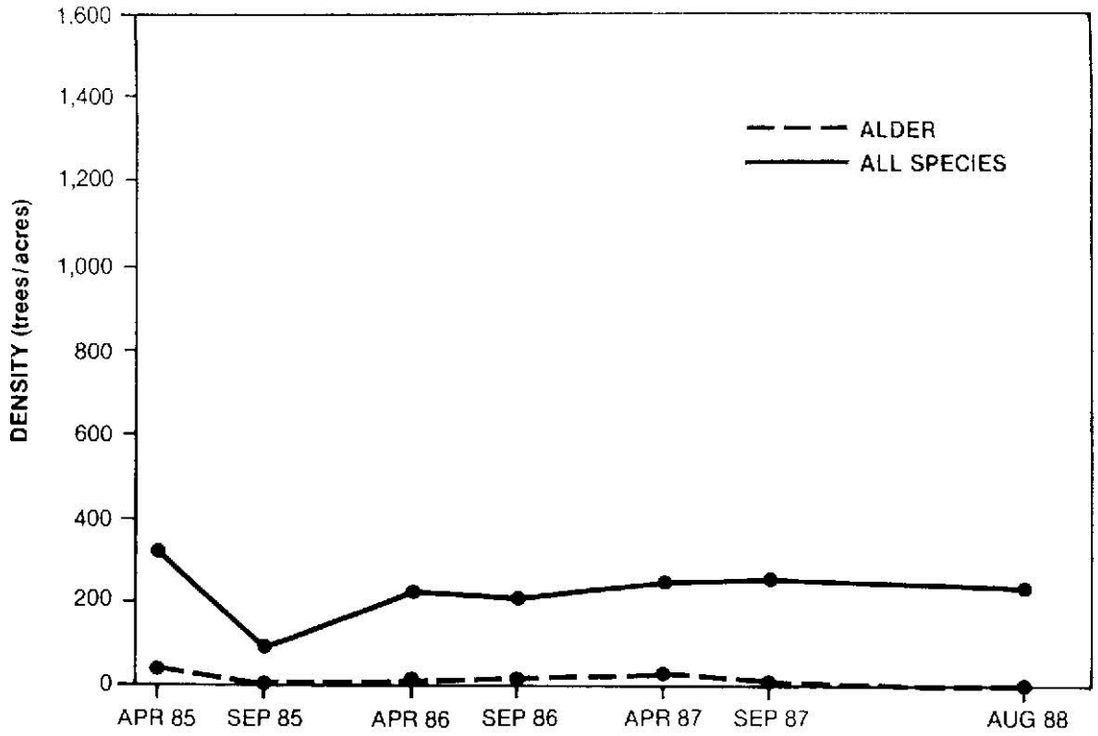

Figure 3.11 Trends in tree seedling density on the Dry Control span.

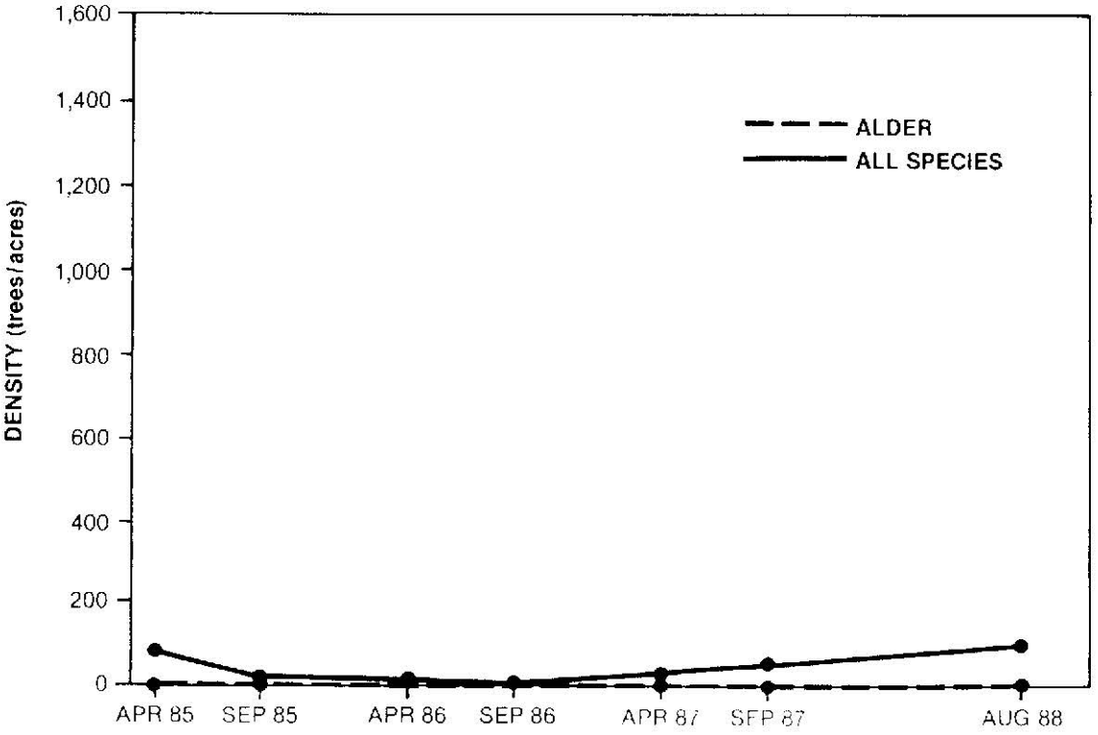

Figure 3.12 Trends in tree seedling density on the Dry Treatment span.

The reduction in tree seedlings was more noticeable on the Dry Treatment Span. Alder was absent until August 1988, and the density of all species was never more than 45 percent of the density on the Dry Control span. (Figures 3.11 and 3.12).

4.0 DISCUSSION

The first objective of this study was to determine the practical feasibility of establishing grasslands under typical right-of-way conditions. Feasibility appears dependent on both technical and economic factors. From a technical standpoint, grassland establishment was hindered by rough terrain and unpredictable weather. Site preparation, seeding and fertilization were difficult because of the irregular terrain on the Treatment Spans, even though both spans were among the flattest and most uniform on the right-of-way. The bulldozer used for site preparation was unable to reach several small depressions on both Treatment Spans, and it got mired down in the seeps and areas of saturated soils on the Wet Treatment Span. As a consequence of the varied terrain, seeding was conducted with hand spreaders, and fertilization required the use of a specialized all-terrain vehicle. It seems unlikely, therefore, that site preparation as conducted in this study would be feasible on a larger scale. Certainly, portions of almost every right-of-way could be worked by bulldozer, but the percentage of unaccessible spots within the right-of-way increases as the terrain becomes more irregular, thereby decreasing the overall effectiveness of the method.

Weather was another major hinderence to grassland establishment. Rain during fertilization slowed equipment and delayed the spreading of fertilizer. The lack of rain during the succeeding summer inhibited germination and growth of grass seedlings and probably reduced the effectiveness of the fertilization. Problems with site preparation and seeding can be avoided by careful planning, but problems such as drought cannot be avoided. Even in normal years, the months of July, August and September are relatively dry in the western Cascades. The grass species used on the Treatment Spans are all relatively drought tolerant (adapted to precipitation ranges of 12 to 60 inches; Snyder 1977), but none is capable of germinating or growing aggressively under prolonged drought.

The cost of initial site preparation, seeding and fertilization in 1985 averaged $577 per acre. Following the drought in the summer of 1985, both

Treatment Spans were re-seeded at a cost of $139 per acre, bringing total establishment costs to $716 per acre. If the spans had been re-fertilized, the actual cost would have been approximately $1,000 per acre. During 1987 and 1988, City Light costs averaged $118 per acre for manual tree control, $58 per acre for in-house mechanical control and $266 per acre for contract mechanical control. The conditions under which each of these methods was used varied considerably, but in all cases control lasted approximately three years. This translates to $39 per acre per year for manual, $19 per acre per year for in-house mechanical and $89 per acre per year for contrast mechanical control. For the grassland to be cost effective, the control of tree growth from a single treatment would have to last for roughly 15 years. Control on the Wet Treatment Span diminished by the end of the third growing season, while it appears to have continued through the end of 1988 (the fourth growing season) on the Dry Treatment (Figure 3.12). Control probably could have been extended on the Wet Treatment by re-fertilizing, but it is unlikely that it could have lasted 15 years.

Fertilization of existing vegetation may be more feasible than attempting to establish an entirely new plant community as we did here. The PP&L study (Beak 1987) showed that fertilization of an established community can increase grass biomass and decrease alder seedling invasion for up to two years. PP&L started with an established grass component in the plant community, but that is not an unusual situation. Most existing rights-of-way have at least some grass present because of seeding that was done at the time of powerline construction or during routine vegetation management. Both Control Spans (and presumably both Treatment Spans as well) in our study had grass present at the beginning of the study. It is likely that fertilization of the existing vegetation on the Control Spans would increase the coverage and overall dominance of grasses. In situations where grass is absent or makes up a very small part of the right-of-way plant community, a combination of fertilizer and grass seed (i.e., hydro seed) may be feasible. Creation of a grass monoculture would be extremely difficult without clearing prior to seeding, but it may be possible to achieve full utilization of the growing space (i.e., competitive exclusion of tree

seedlings) by a combination of grasses, forbs and shrubs. The advantages to seeding without site preparation are: a) lower initial establishment cost, b) elimination of the scarified stage during which alder invasion is temporarily facilitated rather than discouraged and c) greater flexibility in the use of fertilized grasslands on rough and irregular terrain.

The second objective of this study was to determine the effectiveness of grasses at inhibiting the establishment and growth of tree seedlings. The treatment appears to have been effective on the Dry Site, where tree seedling density was reduced significantly through August 1988. However, the treatment was not effective on the Wet Site. The density of tree seedlings on the Wet Treatment Span was low initially, but increased dramatically by September 1986 and continued to increase through the end of the study (August 1988). The explanation for this variable response between the two sites appears to involve a combination of soil fertility and soil moisture. Soil fertility was supplemented with nitrogen fertilizer on the assumption that grasses become more competitive than other forms of vegetation on high nitrogen soils (West 1987). Every indication is that the fertilizer had little or no effect on either site. Because of the 1985 drought, the amount of vegetation (particularly grasses) on the Treatment Spans was greatly reduced. Nitrogen was applied shortly after scarification and seeding, but most likely volatized before it could be taken up by plants. The decision not to re-fertilize was made in April 1986 when the grass on the Treatment Spans appeared greener and more advanced in its annual growth than grass on Control Spans. This was taken at the time as an indication of nitrogen fertilizer, but it probably was due to the abundance on the Treatment Span of perennial and annual rye, which are characteristically darker in color and lusher early in the growing season than other grasses (Hitchcock 1971). A more accurate measure of the presence of nitrogen is provided by the biomass data. Fertilization with nitrogen should have produced an increase in total above-ground biomass on the Treatment Spans (Goetz 1969), but that did not happen. There was a clear shift from ferns to grasses on both Treatment Spans, but total biomass did not increase (Table 3.1). Grass coverage increased as a result of the treatment, but it never exceeded 60 percent on the Dry Treatment Span and it

exceeded 60 percent on the Wet Treatment Span only at the April 1987 sampling (Table 3.2). Apparently the dense sod layer necessary to control tree seedling establishment never developed on either Treatment Span. Partial suppression of tree seedlings may have occurred, because the decline in grass coverage at the Wet Treatment Span in late 1987 corresponds with an increase in the density of tree seedlings (Table 3.5).

Examination of the data on tree seedling densities indicates that the presence of grasslands inhibited tree establishment through April 1986 on the Wet Treatment Span and through September 1987 on the Dry Treatment Span. Comparison with the grass/forb coverage data, however, show that grass coverage was 54 percent or less during years of low tree seedling densities (1985 and 1986). This suggests that a factor other than grass coverage was responsible for inhibiting seedling establishment. Low soil moisture was most likely the cause. In both 1985 and 1986 there was very little precipitation between June and September. This probably had a strong inhibitory effect on young tree seedlings, particularly alder seedlings which have low drought tolerance (Kenady 1978).

5.0 CONCLUSIONS

The establishment of grassland vegetation on a western Cascade right-of-way is technically feasible, but it is complicated by irregular terrain and unpredictable weather. Terrain problems involve primarily the use of heavy equipment to prepare the site and spread fertilizer. Methods that rely less on scarification of the site would: a) reduce establishment costs, b) reduce the risk of tree invasion during the first two years following treatment and c) expand the usefulness of this technique to more rugged terrain. The establishment of grasslands through seeding and fertilizing of existing vegetation should be tested on similar right-of-way spans. Weather conditions, especially drought, cannot be predicted, however, measures such as mulch application can be employed to minimize the risk of grass failure.

The effectiveness of grasslands at inhibiting tree seedling growth cannot be demonstrated by the results of this study. Densities of tree seedlings were lower on Treatment Spans during the initial years of the study, but low grass density during the same years suggests that grasses were not the primary factor inhibiting tree seedling establishment. Most likely, unusually dry growing conditions in 1985 and 1986 inhibited the establishment of both grasses and trees alike.

6.0 LITERATURE CITED

Barrett, J.W. 1979. Silviculture of ponderosa pine in the Pacific Northwest: the state of our knowledge. U.S.D.A. For. Serv. Gen. Tech. Rep. PNW-97. Pac. N.W. For. and Range Exp. Sta., Portland, OR. 106p.

Bohn, C.C. and J.C. Buckhouse. 1985. Some responses of riparian soils to grazing management in northeastern Oregon. J. Range Mgmt. 38(4):378-381.

Daubenmire, R.F. 1968. Plant communities: a textbook of plant synecology. Harper and Row, New York. 300p.

Franklin, J.F. and C.T. Dyrness. 1973. Natural vegetation of Oregon and Washington. U.S. Forest Service Gen. Tech. Rep. PNW-8. 417p.

Goetz, H. 1969. Composition and yields of native grassland sites fertilized at different rates of nitrogen. J. Range Mgmt. 22:384-390.

Hitchcock, A.S. 1971. Manual of the grasses of the United States. Dover Publ., Inc., New York. 1051p.

Hurlbert, S.H. 1984. Pseudoreplication and the design of ecological field experiments. Ecological Monographs. 54(2):187-211.

Kenady, R.M. 1978. Regeneration of red alder. p. 183-191. In Utilization and Management of alder. U.S.D.A. For. Serv. Gen. Tech. Rep. PNW-70. Pac. N.W. For. and Range Exp. Sta., Portland, OR.

Snyder, R.V. 1977. Grass seeding guide for Skykomish, North Bend and White River Ranger Districts. Mt. Baker-Snoqualmie National Forest, Seattle, Wash. 15p.

Taber, R.D. and S.D. West. 1984. Biological processes in the control of risk tree species on rights-of-way in forested mountains. Third symposium on environmental concerns in rights-of-way management, San Diego, CA.

West, S.D. 1987. Nitrogen fertilization and the suppression of tree establishment on western Washington rights-of-way. p. 128-132. In Proceedings of Fourth Symposium on Env. Concerns in R-O-W Mgmt., Indianapolis, IN, Oct. 1987.

Wilson, E.O. and W.H. Bossert. 1971. A primer of population biology. Sinauer Assoc., Inc., Stamford, Conn. 192p.

APPENDICES

APPENDIX A

CLIPPED PLOT BIOMASS
DATA TABLES

Table A-1. Clipped plot data and summary statistics for April 1985.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	1.7	0.0	0.2	0.2	51.3	0.0	31.8	0.0	0.2	0.0	0.8	0.4	53.2	0.0	32.8	0.6	85	0	85	0
2	90.7	3.5	54.5	0.0	0.0	0.0	24.0	0.0	13.6	0.5	2.3	0.0	104.3	4.0	80.8	0.0	1	3	98	1
3	4.7	0.0	3.2	0.0	63.4	0.0	79.5	0.0	1.9	0.0	2.6	1.4	70.0	0.0	85.3	1.4	15	0	15	1
4	0.0	0.0	1.3	1.3	601.2	0.0	12.2	0.0	0.0	0.0	0.8	0.0	601.2	0.0	14.3	1.3	3	1	3	1
5	0.0	0.0	8.5	0.0	43.3	0.0	157.7	0.0	0.2	0.0	0.8	0.7	43.5	0.0	167.0	0.7	15	0	15	0
6	0.0	1.3	69.0	0.4	139.5	0.0	23.2	0.0	1.0	0.0	6.0	0.4	140.5	1.3	98.2	0.8	15	3	63	1
7	0.0	0.0	23.6	0.0	80.1	0.0	0.0	0.0	1.1	0.0	16.3	0.0	81.2	0.0	39.9	0.0	3	0	15	0
8	2.5	0.0	9.8	0.0	179.5	0.0	85.6	0.0	2.6	0.0	0.2	0.0	184.6	0.0	95.6	0.0	15	0	1	0
9	0.1	0.0	106.8	0.0	204.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	204.4	0.0	160.8	0.0	3	0	85	1
10	1.1	0.0	85.0	0.0	96.2	0.0	4.3	0.0	0.0	0.0	0.1	0.0	97.3	0.0	89.4	0.0	15	3	15	0
11	0.0	0.0	23.0	9.5	133.2	0.0	4.9	1.0	0.0	0.0	0.1	0.8	133.2	0.0	28.0	11.3	3	1	38	1
12	0.0	0.0	44.2	2.5	300.7	0.0	24.9	0.0	0.0	0.0	3.8	0.7	300.7	0.0	72.9	3.2	3	1	85	1
13	0.4	0.0	6.0	0.6	43.7	0.0	134.6	0.0	3.6	0.0	0.6	0.1	47.7	0.0	141.2	0.7	63	0	15	1
14	0.0	0.0	113.3	5.8	201.2	0.0	0.8	0.0	0.0	0.0	0.0	0.1	201.2	0.0	114.1	5.9	15	3	38	15
15	8.7	0.0	41.7	0.1	92.8	0.0	7.3	0.0	2.0	0.0	0.2	0.0	103.5	0.0	49.2	0.1	63	1	15	0
16	1.1	0.0	93.9	0.0	83.6	0.0	0.0	0.0	0.2	0.0	0.1	0.0	84.9	0.0	94.0	0.0	38	3	38	0
17	48.9	0.0	28.4	0.2	0.0	0.0	9.5	3.7	25.9	0.0	2.7	1.0	74.8	0.0	40.6	4.9	98	1	15	1
18	0.0	0.0	77.8	2.0	2.0	12.8	4.1	0.9	10.9	0.7	1.1	0.8	12.9	13.5	83.0	3.7	3	15	15	1
19	7.4	0.0	59.2	2.2	5.0	0.0	0.0	0.2	0.5	0.0	1.5	0.1	12.9	0.0	60.7	2.5	15	1	63	1
20	0.0	0.0	20.0	3.6	207.4	0.0	1.4	3.4	0.0	1.2	88.1	0.9	207.4	1.2	109.5	7.9	15	15	63	3
$\bar{x}$	8.3	0.2	46.2	1.4	126.4	0.6	30.3	0.5	3.2	0.1	6.4	0.4	138.0	1.0	82.9	2.3	24.3	2.6	39.0	1.4
S2	493.8	0.7	1873.3	6.0	19400.8	8.2	2178.1	1.2	42.2	0.1	383.3	0.2	17403.6	9.6	1809.9	9.7				
S	22.2	0.8	43.3	2.5	139.3	2.9	46.7	1.1	6.5	0.3	19.6	0.4	131.9	3.1	42.5	3.1				
SE	5.0	0.2	9.7	0.6	31.2	0.6	10.4	0.3	1.5	0.1	4.4	0.1	29.5	0.7	9.5	0.7				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

Table A-2. Clipped plot data and summary statistics for September 1985.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	1.9	39.5	1.9	29.0	26.1	0.0	7.7	0.0	5.6	8.6	28.5	10.6	33.6	48.1	38.1	39.6	3	1	15	0
2	49.0	20.7	65.5	1.5	6.9	0.0	17.5	8.2	0.1	18.8	21.0	0.3	56.0	39.5	104.0	10.0	38	1	85	0
3	3.8	74.0	56.2	3.2	150.0	0.0	6.8	28.9	0.1	6.5	31.9	5.3	153.9	80.5	94.9	37.4	3	1	85	1
4	25.1	39.0	0.2	12.9	83.7	0.0	1.5	0.0	19.7	2.0	192.7	19.7	128.5	41.0	194.4	32.6	63	3	63	15
5	57.0	42.3	32.6	0.8	13.2	0.0	22.6	16.8	44.7	0.8	44.0	1.3	114.9	43.1	99.2	18.9	15	15	63	0
6	0.0	2.7	46.3	0.9	468.5	0.0	8.7	0.0	0.1	1.9	47.8	0.1	468.6	4.6	102.8	1.0	15	0	85	0
7	0.1	10.4	65.3	3.5	148.1	7.0	10.5	15.3	2.2	6.7	66.8	0.1	150.4	24.1	142.6	18.9	15	3	85	1
8	0.0	29.5	97.5	2.3	61.0	40.2	51.0	52.3	55.1	2.9	0.0	20.4	116.1	72.6	148.5	75.0	1	3	15	1
9	3.2	11.0	69.8	0.8	0.5	0.0	1.6	5.5	20.5	11.8	0.0	0.6	24.2	22.8	71.4	6.9	1	1	15	1
10	32.5	23.2	63.2	10.2	84.0	14.8	17.8	20.8	1.5	1.3	0.0	2.8	118.0	39.3	81.0	33.8	15	1	38	0
11	2.9	1.7	73.8	44.6	181.5	0.0	0.0	0.0	0.0	2.2	0.0	6.4	184.4	3.9	73.8	51.0	38	1	15	0
12	0.3	123.5	50.3	13.4	129.0	0.0	16.8	6.2	0.1	12.1	38.1	13.4	129.4	135.6	105.2	33.0	15	1	85	1
13	0.0	17.7	31.5	15.2	42.0	0.0	2.0	37.2	16.5	12.0	129.5	18.2	58.5	29.7	163.0	70.6	3	0	38	0
14	0.0	3.3	87.1	38.5	663.5	0.0	6.0	2.6	0.0	0.8	0.0	8.4	663.5	4.1	93.1	49.5	38	0	63	1
15	0.0	35.2	58.0	13.7	7.7	0.0	0.3	47.5	6.5	8.3	0.6	5.0	14.2	43.5	58.9	66.2	3	1	3	1
16	0.0	44.7	117.1	5.2	407.5	0.0	6.1	0.9	0.0	33.2	0.0	6.0	407.5	77.9	123.2	12.1	15	0	63	1
17	0.0	113.6	212.5	0.6	0.0	5.3	0.0	15.3	0.0	4.1	8.1	10.0	0.0	123.0	220.6	25.9	3	3	3	3
18	0.0	26.0	152.0	0.7	16.0	0.0	0.6	1.4	7.5	17.0	26.8	1.6	23.5	43.0	179.4	3.7	3	1	38	3
19	19.3	8.2	52.4	4.1	72.7	27.6	24.3	22.8	1.3	3.1	15.2	4.5	93.3	38.9	91.9	31.4	1	1	38	3
20	0.0	92.6	27.2	31.7	251.5	35.9	29.4	13.7	0.1	10.7	0.0	23.5	251.6	139.2	56.6	68.9	63	3	0	3
$\bar{X}$	9.8	37.9	68.0	11.6	140.7	6.5	11.6	14.8	9.1	8.2	32.6	7.9	159.5	52.7	112.1	34.3	17.6	2.0	44.8	1.8
S2	307.5	1298.4	2428.3	187.0	32281.0	163.5	167.0	257.0	242.3	63.7	2428.1	55.9	29065.4	1651.0	2365.9	535.5				
S	17.5	36.0	49.3	13.7	179.7	12.8	12.9	16.0	15.6	8.0	49.3	7.5	170.5	40.6	48.6	23.1				
SE	3.9	8.0	11.0	3.1	40.2	2.9	2.9	3.6	3.5	1.8	11.0	1.7	38.1	9.1	10.9	5.2				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

Table A-3. Clipped plot data and summary statistics for April 1986.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	0.4	52.4	5.2	44.3	143.8	0.0	86.6	0.0	0.5	6.9	3.4	11.5	144.7	59.3	95.2	55.8	15	15	3	1
2	32.9	54.2	127.6	6.8	0.0	0.0	7.1	16.8	2.4	9.7	6.9	14.0	35.3	63.9	141.6	37.6	63	1	85	1
3	0.0	88.5	0.2	0.7	0.0	0.0	97.5	71.6	132.6	0.2	5.3	7.8	132.6	88.7	103.0	80.1	15	15	38	3
4	0.0	44.4	30.2	32.6	799.5	0.0	49.2	0.0	0.0	0.1	4.0	22.1	799.5	44.5	83.4	54.7	3	38	85	3
5	36.3	33.9	46.5	66.7	0.0	0.0	9.5	0.0	20.1	0.3	7.7	17.2	56.4	34.2	63.7	83.9	63	38	63	3
6	0.0	65.5	63.5	1.0	152.7	0.0	48.4	1.6	0.0	14.7	3.1	0.5	152.7	80.2	115.0	3.1	15	1	38	0
7	4.1	135.0	31.0	1.4	36.1	0.0	2.7	27.8	4.1	0.1	4.2	6.0	44.3	135.1	37.9	35.2	15	1	63	1
8	0.0	12.8	-	18.3	41.3	0.0	32.9	10.1	12.0	16.0	-	19.2	53.3	28.8	-	47.6	15	1	-	1
9	0.7	24.1	-	9.8	0.0	6.7	-	58.2	10.6	5.7	-	12.7	11.3	36.5	-	80.7	15	38	-	15
10	3.2	11.4	-	16.6	109.8	0.0	-	4.2	0.0	0.8	-	11.0	113.0	12.2	-	31.8	63	3	-	1
11	0.8	45.0	-	105.1	186.7	0.0	-	0.0	1.5	20.2	-	7.6	189.0	65.2	-	112.7	15	1	-	3
12	1.2	60.3	-	5.0	59.4	0.0	-	8.8	0.0	3.7	-	1.1	60.6	64.0	-	14.9	15	38	-	1
13	0.0	93.5	12.9	43.5	252.3	0.9	15.4	98.1	0.0	1.5	0.1	22.8	252.3	95.9	28.4	164.4	38	1	3	1
14	0.8	16.4	-	68.8	50.3	7.1	-	6.6	0.6	10.2	-	7.3	51.7	33.7	-	82.7	15	1	-	3
15	0.0	12.5	-	55.2	68.2	0.0	-	6.4	0.0	4.5	-	5.4	68.2	17.0	-	67.0	63	1	-	1
16	0.0	89.8	-	12.6	137.5	0.0	-	23.9	0.0	17.9	-	24.2	137.5	107.7	-	60.7	3	15	-	1
17	0.0	39.7	-	29.8	0.0	0.0	-	1.5	0.2	7.1	-	1.0	0.2	46.8	-	32.3	15	3	-	3
18	0.0	37.0	-	59.0	23.5	0.0	-	0.0	0.0	36.5	-	12.5	23.5	73.5	-	71.5	63	1	-	3
19	0.3	17.4	-	0.4	122.8	0.0	-	3.7	0.0	5.7	-	0.0	123.1	23.1	-	4.1	38	1	-	3
20	10.4	48.4	-	34.7	41.9	40.6	-	2.6	2.3	20.7	-	11.4	54.6	109.7	-	48.7	15	63	-	3
21	-	-	5.3	-	-	-	32.9	-	-	-	1.1	-	-	-	39.3	-	-	-	3	-
22	-	-	63.8	-	-	-	22.8	-	-	-	19.8	-	-	-	106.4	-	-	-	63	-
23	-	-	161.4	-	-	-	6.7	-	-	-	1.3	-	-	-	169.4	-	-	-	63	-
24	-	-	13.8	-	-	-	153.2	-	-	-	7.4	-	-	-	174.4	-	-	-	38	-
25	-	-	116.2	-	-	-	12.2	-	-	-	5.3	-	-	-	133.7	-	-	-	15	-
26	-	-	11.8	-	-	-	5.5	-	-	-	0.7	-	-	-	18.0	-	-	-	38	-
27	-	-	28.7	-	-	-	26.4	-	-	-	7.2	-	-	-	62.3	-	-	-	85	-
28	-	-	86.5	-	-	-	9.0	-	-	-	7.8	-	-	-	103.3	-	-	-	63	-
29	-	-	16.5	-	-	-	63.4	-	-	-	19.1	-	-	-	99.0	-	-	-	63	-
30	-	-	30.8	-	-	-	15.7	-	-	-	12.8	-	-	-	59.3	-	-	-	85	-
31	-	-	5.3	-	-	-	25.2	-	-	-	0.9	-	-	-	31.4	-	-	-	63	-
32	-	-	0.5	-	-	-	97.5	-	-	-	2.3	-	-	-	100.3	-	-	-	63	-
$\bar{X}$	4.6	49.1	42.9	30.6	111.3	2.8	39.4	17.1	9.4	9.1	6.0	10.8	125.2	61.0	88.2	58.5	28.1	13.8	51.0	2.6
S2	111.8	1067.0	2173.5	840.0	31372.0	83.8	1667.1	748.7	869.9	89.2	31.1	56.7	29351.6	1153.7	2080.8	1428.1				
S	10.6	32.7	46.6	29.0	177.1	9.2	40.8	27.4	29.5	9.4	5.6	7.5	171.3	34.0	45.6	37.8				
SE	2.4	7.3	10.4	6.5	39.6	2.0	9.1	6.1	6.6	2.1	1.2	1.7	38.3	7.6	10.2	8.4				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

Table A-4. Clipped plot data and summary statistics for September 1986.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	0.0	72.5	0.0	30.4	203.0	0.0	2.2	0.0	0.0	15.3	4.7	8.0	203.0	87.8	6.9	38.4	0	1	1	0
2	0.0	297.9	22.3	4.2	66.1	0.0	43.8	34.2	0.0	0.0	9.1	2.4	66.1	297.9	75.2	40.8	38	1	38	0
3	0.4	62.6	9.3	44.6	39.4	0.0	213.8	0.0	8.1	53.1	3.5	16.2	47.9	115.7	226.6	60.8	1	15	3	0
4	0.0	118.9	0.0	166.6	557.1	0.0	7.5	0.0	0.0	46.9	0.4	5.4	557.1	165.8	7.9	172.0	1	15	1	0
5	0.1	136.8	69.1	10.3	148.1	0.0	69.0	0.0	0.4	15.2	17.5	0.4	148.6	152.0	155.6	10.7	63	3	38	0
6	0.0	93.2	26.8	45.8	700.5	0.0	15.8	0.0	0.0	27.3	11.6	3.3	700.5	120.5	54.2	49.1	3	1	15	0
7	0.0	228.4	4.0	28.2	71.0	0.0	86.8	27.1	1.9	18.2	6.7	2.8	72.9	246.6	97.5	58.1	3	1	1	0
8	0.1	25.9	-	75.4	3.1	0.0	-	27.1	29.2	0.4	-	42.7	33.4	26.3	-	145.2	38	15	-	1
9	0.0	66.0	-	24.1	221.1	0.0	-	16.6	0.0	23.6	-	12.9	221.1	89.6	-	53.6	1	3	-	3
10	0.0	123.8	-	67.8	249.9	0.0	-	6.2	0.0	9.6	-	22.4	249.9	133.4	-	96.4	1	15	-	1
11	0.0	115.5	-	153.7	27.1	1.2	-	14.1	0.0	15.6	-	16.3	27.1	132.3	-	184.1	0	1	-	1
12	0.1	22.7	-	20.2	160.5	0.0	-	13.4	0.2	6.4	-	30.1	160.8	29.1	-	63.7	15	15	-	1
13	0.0	284.6	11.1	66.8	276.3	0.0	234.5	89.7	0.0	2.5	12.0	19.4	276.3	284.6	257.6	175.9	15	1	15	1
14	0.0	38.8	-	141.7	322.2	0.0	-	0.0	0.0	28.2	-	5.8	322.2	67.0	-	147.5	38	1	-	3
15	0.0	12.9	-	14.0	29.2	0.0	-	81.9	0.0	42.5	-	1.1	29.2	55.4	-	97.0	85	3	-	0
16	0.0	133.0	-	104.6	332.0	0.0	-	1.3	1.8	12.1	-	17.9	333.8	145.1	-	123.8	3	3	-	0
17	18.0	71.6	-	10.1	62.2	33.0	-	6.5	22.9	61.5	-	24.3	103.1	127.5	-	40.9	15	15	-	0
18	0.0	75.6	-	33.0	0.0	0.0	-	30.6	1.2	75.2	-	0.8	1.2	76.8	-	64.4	15	1	-	0
19	0.8	3.9	-	31.8	104.3	5.0	-	74.8	0.0	4.5	-	22.4	105.1	13.4	-	129.0	15	3	-	0
20	0.3	255.5	-	35.4	74.8	0.0	-	2.8	0.0	2.5	-	1.9	75.1	255.5	-	40.1	15	38	-	1
21	-	-	10.7	-	-	-	67.6	-	-	-	5.2	-	-	-	83.5	-	-	-	15	-
22	-	-	19.2	-	-	-	103.3	-	-	-	16.4	-	-	-	138.9	-	-	-	3	-
23	-	-	37.1	-	-	-	33.9	-	-	-	44.2	-	-	-	115.2	-	-	-	15	-
24	-	-	32.1	-	-	-	19.7	-	-	-	9.5	-	-	-	61.3	-	-	-	38	-
25	-	-	76.8	-	-	-	0.3	-	-	-	9.5	-	-	-	86.6	-	-	-	15	-
26	-	0.0	-	-	-	-	116.8	-	-	-	5.9	-	-	-	122.7	-	-	-	15	-
27	-	-	7.1	-	-	-	2.2	-	-	-	60.2	-	-	-	69.5	-	-	-	98	-
28	-	-	99.7	-	-	-	17.4	-	-	-	34.3	-	-	-	151.4	-	-	-	3	-
29	-	-	13.5	-	-	-	24.1	-	-	-	8.6	-	-	-	46.2	-	-	-	85	-
30	-	-	3.9	-	-	-	5.4	-	-	-	46.2	-	-	-	55.5	-	-	-	63	-
31	-	-	46.6	-	-	-	105.2	-	-	-	11.4	-	-	-	163.2	-	-	-	1	-
32	-	-	4.8	-	-	-	173.8	-	-	-	12.7	-	-	-	191.3	-	-	-	63	-
$\bar{X}$	1.0	112.0	24.7	55.4	182.3	1.9	67.1	21.3	3.2	23.0	16.4	12.8	186.7	131.1	108.3	89.5	18.3	7.6	26.3	0.6
S2	16.0	7969.7	798.9	2434.3	34695.7	54.6	5138.9	820.0	64.0	479.2	267.3	135.8	33570.0	7054.2	4601.0	2870.9				
S	4.0	89.2	28.2	49.3	186.2	7.3	71.6	28.6	8.0	21.8	16.3	11.6	183.2	83.9	67.8	53.5				
SE	0.9	20.0	6.3	11.0	41.6	1.6	16.0	6.3	1.7	4.8	3.6	2.5	40.9	18.7	15.1	11.9				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

Table A-5. Clipped plot data and summary statistics for April 1987.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	10.4	171.5	4.6	60.8	3.8	0.0	20.0	2.4	17.6	0.7	2.9	5.7	31.8	177.2	27.5	68.9	38	15	38	63
2	75.8	58.4	43.6	58.8	0.0	0.0	20.4	5.2	18.7	9.4	14.0	34.1	94.5	67.8	78.0	98.1	63	98	63	38
3	0.1	178.1	13.6	76.6	249.1	0.0	57.9	35.5	0.0	0.1	3.1	19.6	249.2	178.2	74.6	131.7	15	15	63	38
4	0.0	117.8	2.3	116.3	469.3	0.0	60.8	0.0	0.0	1.4	26.7	15.0	469.3	119.2	89.8	131.3	38	63	15	15
5	44.2	76.2	15.6	64.4	0.0	0.0	70.3	143.7	12.4	1.6	27.8	0.0	56.6	77.8	113.7	208.1	63	63	38	15
6	0.0	47.5	40.0	14.6	267.5	12.2	28.6	16.9	3.7	18.5	9.4	0.1	271.2	78.2	78.0	31.6	63	38	38	3
7	0.1	139.9	10.6	27.8	619.5	0.0	15.6	4.4	0.0	0.0	2.7	14.2	619.6	139.9	28.9	46.4	3	38	85	3
8	0.0	50.7	-	76.1	441.3	0.0	-	78.8	8.5	4.9	-	1.5	449.8	55.6	-	156.4	1	15	-	15
9	0.0	76.5	-	17.3	319.5	0.1	-	31.1	0.1	1.7	-	6.0	319.6	78.3	-	54.4	63	85	-	38
10	0.0	12.9	-	58.3	711.6	0.0	-	35.8	0.3	2.2	-	5.9	711.9	15.1	-	100.0	15	3	-	63
11	1.3	124.5	-	102.5	413.6	0.0	-	16.1	0.0	14.0	-	0.5	414.9	138.5	-	119.1	3	15	-	15
12	0.9	69.0	-	33.1	60.9	12.3	-	0.0	0.1	7.8	-	7.3	61.9	89.1	-	40.4	15	63	-	3
13	17.6	142.6	3.4	60.0	0.0	0.0	69.8	112.1	0.0	13.2	1.2	0.2	17.6	155.8	74.4	172.3	1	38	38	3
14	0.1	34.3	-	117.5	226.9	0.0	-	23.6	0.0	18.8	-	2.3	227.0	53.1	-	143.4	38	38	-	63
15	0.0	48.8	-	119.6	49.7	0.0	-	5.2	0.0	10.7	-	4.9	49.7	59.5	-	129.7	38	38	-	15
16	0.0	153.5	-	54.7	57.8	0.0	-	9.3	0.2	1.3	-	6.7	58.0	154.8	-	70.7	38	38	-	63
17	0.0	39.2	-	53.6	87.2	1.0	-	25.8	0.0	1.0	-	7.3	87.2	41.2	-	86.7	15	38	-	1
18	0.0	104.4	-	73.0	8.2	0.0	-	1.2	2.2	8.2	-	2.2	10.4	112.6	-	76.4	85	15	-	15
19	0.0	9.4	-	7.6	99.6	0.0	-	48.3	0.0	6.1	-	0.5	99.6	15.5	-	56.4	85	38	-	15
20	0.0	148.1	-	34.1	216.1	0.0	-	43.3	0.0	7.5	-	6.4	216.1	155.6	-	83.8	38	3	-	15
21	-	-	5.0	36.1	-	-	93.4	4.0	-	-	6.6	4.2	-	-	10.5	44.3	-	-	38	15
22	-	-	25.1	48.1	-	-	10.5	0.0	-	-	17.0	15.1	-	-	52.6	63.2	-	-	85	15
23	-	-	75.2	-	-	-	24.7	-	-	-	8.5	-	-	-	108.4	-	-	-	38	-
24	-	-	11.0	-	-	-	1.5	-	-	-	1.8	-	-	-	14.3	-	-	-	85	-
25	-	-	22.1	-	-	-	1.0	-	-	-	1.9	-	-	-	25.0	-	-	-	85	-
26	-	-	7.8	-	-	-	40.8	-	-	-	8.6	-	-	-	57.2	-	-	-	38	-
27	-	-	3.1	-	-	-	6.2	-	-	-	31.9	-	-	-	41.2	-	-	-	85	-
28	-	-	25.2	-	-	-	0.0	-	-	-	9.0	-	-	-	34.2	-	-	-	63	-
29	-	-	4.3	-	-	-	14.2	-	-	-	15.0	-	-	-	33.5	-	-	-	85	-
30	-	-	48.7	-	-	-	73.9	-	-	-	18.2	-	-	-	140.8	-	-	-	85	-
31	-	-	4.3	-	-	-	16.1	-	-	-	4.4	-	-	-	24.8	-	-	-	3	-
32	-	-	0.7	-	-	-	65.6	-	-	-	7.4	-	-	-	73.7	-	-	-	15	-
$\bar{X}$	7.5	90.2	18.3	61.3	215.1	1.3	34.6	31.9	3.2	6.5	10.9	7.0	225.8	97.9	59.1	100.3	35.9	37.9	54.2	24.0
S2	367.7	2853.8	389.9	1139.9	48000.8	14.1	853.8	1509.5	36.9	36.7	85.9	69.5	44343.3	2645.3	1299.6	2269.3				
S	19.2	53.4	19.7	33.8	219.1	3.8	29.2	38.9	6.1	6.1	9.3	8.3	210.6	51.4	36.0	47.6				
SE	4.3	11.9	4.4	7.6	49.0	0.9	6.5	8.7	1.4	1.4	2.1	1.9	47.1	11.5	8.1	10.6				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

Table A-6. Clipped plot data and summary statistics for September 1987.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	0.2	108.2	0.5	55.9	151.3	18.7	21.4	28.6	0.0	56.1	14.6	27.2	151.7	183.0	36.5	111.7	85	15	38	15
2	3.4	55.2	34.3	130.8	24.3	0.0	18.9	0.0	6.1	54.1	8.6	12.2	33.8	109.3	61.8	143.0	63	98	63	63
3	1.7	198.4	8.2	136.4	60.5	0.0	55.0	46.0	60.5	20.4	8.4	13.0	122.7	218.8	71.6	195.4	38	63	63	38
4	1.2	281.5	7.9	125.1	244.6	0.0	67.6	25.3	4.2	2.6	0.5	19.2	250.0	284.1	76.0	169.6	63	15	15	15
5	51.3	178.0	7.6	33.6	23.6	0.0	26.7	31.5	45.1	11.0	15.6	1.3	120.0	189.0	49.9	66.4	38	63	38	15
6	0.2	26.3	4.4	69.8	167.3	0.0	5.6	0.0	0.2	53.0	9.5	20.0	167.7	79.3	19.5	89.8	63	3	3	0
7	0.0	45.4	18.0	8.1	62.2	6.8	31.8	19.3	0.0	0.0	14.5	2.7	62.2	52.2	64.3	30.1	1	38	38	0
8	0.0	66.0	-	92.4	0.9	0.0	-	35.6	51.5	20.9	-	9.5	52.4	86.9	-	137.5	3	63	-	15
9	0.9	58.5	-	56.2	4.2	0.0	-	18.8	38.9	40.6	-	1.0	44.0	99.1	-	76.0	3	15	-	3
10	37.4	80.0	-	69.9	53.9	20.9	-	7.3	7.3	19.9	-	4.9	98.6	120.8	-	82.1	38	38	-	15
11	0.0	10.5	-	119.0	90.9	0.0	-	8.3	0.0	40.2	-	2.0	90.9	50.7	-	129.3	1	15	-	3
12	0.0	8.8	-	16.4	518.0	0.0	-	0.6	0.0	79.0	-	0.8	518.0	87.8	-	17.8	15	85	-	3
13	0.0	140.5	3.8	68.9	0.4	108.3	38.0	20.0	12.2	0.0	24.7	9.7	12.6	248.8	66.5	98.6	15	3	38	15
14	0.0	14.1	-	149.6	123.5	0.0	-	44.5	0.0	14.4	-	0.0	123.5	28.5	-	194.1	63	3	-	15
15	0.0	35.1	-	89.1	5.8	0.0	-	0.0	0.1	67.0	-	0.6	5.9	102.1	-	89.7	1	15	-	15
16	0.0	182.2	-	42.8	210.9	0.0	-	37.1	0.0	24.0	-	17.6	210.9	206.2	-	97.5	3	63	-	38
17	0.0	99.6	-	45.8	2.3	0.0	-	0.0	6.2	12.2	-	9.7	8.5	111.8	-	55.5	0	15	-	3
18	0.0	179.0	-	37.2	0.0	0.0	-	7.3	28.1	59.4	-	15.1	28.1	238.4	-	59.6	15	15	-	3
19	0.0	14.5	-	11.7	5.8	16.6	-	13.4	0.0	53.9	-	0.7	5.8	85.0	-	25.8	15	15	-	3
20	0.0	338.9	-	71.4	173.0	5.6	-	20.7	0.0	10.6	-	1.5	173.0	355.1	-	93.6	38	1	-	15
21	-	-	12.4	10.6	-	-	42.8	19.0	-	-	16.1	17.1	-	-	71.3	46.7	-	-	38	3
22	-	-	0.7	46.6	-	-	36.4	0.0	-	-	53.1	1.1	-	-	90.2	47.7	-	-	15	1
23	-	-	35.3	-	-	-	14.1	-	-	-	18.6	-	-	-	68.0	-	-	-	15	-
24	-	-	8.5	-	-	-	200.7	-	-	-	14.2	-	-	-	223.4	-	-	-	38	-
25	-	-	89.1	-	-	-	129.1	-	-	-	12.4	-	-	-	230.6	-	-	-	15	-
26	-	-	1.5	-	-	-	253.0	-	-	-	15.5	-	-	-	270.0	-	-	-	38	-
27	-	-	14.7	-	-	-	15.8	-	-	-	26.5	-	-	-	57.0	-	-	-	63	-
28	-	-	65.2	-	-	-	0.4	-	-	-	21.8	-	-	-	87.4	-	-	-	38	-
29	-	-	3.5	-	-	-	23.9	-	-	-	11.4	-	-	-	38.8	-	-	-	85	-
30	-	-	63.5	-	-	-	3.5	-	-	-	6.1	-	-	-	73.1	-	-	-	63	-
31	-	-	45.8	-	-	-	26.3	-	-	-	1.3	-	-	-	73.4	-	-	-	1	-
32	-	-	5.6	-	-	-	36.4	-	-	-	36.3	-	-	-	78.6	-	-	-	15	-
$\bar{X}$	4.8	138.1	21.5	71.5	96.2	8.8	52.4	18.2	13.0	32.0	16.5	9.2	114.0	146.8	90.4	98.2	28.1	32.1	36	13.5
S2	188.6	8169.9	658.4	1838.0	5981.5	594.9	4416.8	235.0	397.6	594.6	145.4	70.8	14202.8	7791.7	4588.7	2633.1				
S	13.7	90.4	25.7	42.9	126.4	24.4	66.5	15.3	19.9	24.4	12.1	8.4	119.2	88.3	67.7	51.3				
SE	3.1	20.7	5.9	9.8	29.0	5.6	15.3	3.5	4.6	6.0	2.8	1.9	27.3	20.3	15.5	11.8				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

Table A-7. Clipped plot data and summary statistics for August 1988.

Biomass (grams/0.5m2 plot)

PLOT	GRASSES				FERNS				FORBS				TOTAL				MOSSES (% cover)			
	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT	WC	WT	DC	DT
1	2.0	98.0	4.0	101.0	202.0	8.0	186.0	9.0	1.0	87.0	21.0	0.0	205.0	193.0	211.0	110.0	63	15	85	38
2	107.0	310.0	22.0	42.0	0.0	0.0	69.0	46.0	179.0	2.0	11.0	14.0	286.0	312.0	102.0	102.0	63	85	15	15
3	18.0	140.0	11.0	45.0	27.0	0.0	205.0	0.0	9.0	81.0	6.0	20.0	54.0	221.0	222.0	65.0	85	38	38	15
4	2.0	191.0	5.0	45.0	105.0	0.0	106.0	0.0	2.0	62.0	8.0	13.0	109.0	253.0	119.0	58.0	98	15	3	3
5	-	292.0	15.0	173.0	-	0.0	132.0	10.0	-	29.0	24.0	0.0	-	321.0	171.0	183.0	98	63	85	15
6	0.0	31.0	37.0	30.0	511.0	0.0	54.0	8.0	0.0	307.0	15.0	14.0	511.0	338.0	106.0	52.0	15	15	38	15
7	0.0	347.0	29.0	11.0	40.0	0.0	93.0	73.0	0.0	26.0	10.0	98.0	40.0	373.0	132.0	182.0	15	15	38	38
8	0.0	208.0	-	80.0	406.0	0.0	-	78.0	0.0	70.0	-	22.0	406.0	278.0	-	180.0	38	15	-	3
9	0.0	105.0	-	114.0	378.0	0.0	-	47.0	0.0	79.0	-	0.0	378.0	184.0	-	161.0	1	15	-	15
10	1.0	127.0	-	60.0	47.0	0.0	-	0.0	0.0	52.0	-	27.0	48.0	179.0	-	87.0	63	15	-	3
11	0.0	117.0	-	204.0	47.0	135.0	-	34.0	0.0	94.0	-	5.0	47.0	346.0	-	243.0	3	3	-	3
12	0.0	23.0	-	32.0	123.0	0.0	-	13.0	0.0	207.0	-	4.0	123.0	230.0	-	49.0	15	3	-	3
13	0.0	247.0	5.0	63.0	487.0	0.0	68.0	108.0	0.0	55.0	7.0	2.0	487.0	302.0	80.0	173.0	1	85	3	3
14	0.0	38.0	-	19.0	48.0	0.0	-	31.0	0.0	149.0	-	6.0	48.0	187.0	-	56.0	3	15	-	15
15	2.0	23.0	-	22.0	0.0	0.0	-	68.0	10.0	61.0	-	4.0	12.0	84.0	-	94.0	38	3	-	38
16	0.0	270.0	-	64.0	46.0	0.0	-	0.0	0.0	63.0	-	9.0	46.0	333.0	-	73.0	1	15	-	38
17	0.0	138.0	-	39.0	337.0	0.0	-	7.0	0.0	23.0	-	10.0	337.0	161.0	-	56.0	3	3	-	3
18	0.0	128.0	-	63.0	0.0	0.0	-	5.0	19.0	115.0	-	21.0	19.0	243.0	-	89.0	15	38	-	3
19	0.0	105.0	-	37.0	317.0	0.0	-	9.0	0.0	98.0	-	2.0	317.0	203.0	-	48.0	3	15	-	85
20	0.0	220.0	-	17.0	239.0	0.0	-	62.0	0.0	20.0	-	0.0	239.0	240.0	-	79.0	3	15	-	3
21	-	-	61.0	209.0	-	-	81.0	0.0	-	-	12.0	0.0	-	-	154.0	209.0	-	-	15	15
22	-	-	3.0	10.0	-	-	34.0	200.0	-	-	38.0	3.0	-	-	75.0	213.0	-	-	38	15
23	-	-	57.0	-	-	-	12.0	-	-	-	8.0	-	-	-	77.0	-	-	-	15	-
24	-	-	18.0	-	-	-	153.0	-	-	-	10.0	-	-	-	181.0	-	-	-	63	-
25	-	-	31.0	-	-	-	0.0	-	-	-	9.0	-	-	-	40.0	-	-	-	3	-
26	-	-	17.0	-	-	-	82.0	-	-	-	15.0	-	-	-	114.0	-	-	-	38	-
27	-	-	6.0	-	-	-	7.0	-	-	-	12.0	-	-	-	25.0	-	-	-	38	-
28	-	-	48.0	-	-	-	11.0	-	-	-	57.0	-	-	-	116.0	-	-	-	1	-
29	-	-	1.0	-	-	-	303.0	-	-	-	19.0	-	-	-	323.0	-	-	-	63	-
30	-	-	28.0	-	-	-	60.0	-	-	-	15.0	-	-	-	103.0	-	-	-	3	-
31	-	-	6.0	-	-	-	4.0	-	-	-	3.0	-	-	-	13.0	-	-	-	38	-
32	-	-	10.0	-	-	-	35.0	-	-	-	75.0	-	-	-	120.0	-	-	-	63	-
$\bar{X}$	6.9	157.9	20.7	67.3	176.8	7.2	84.8	40.2	11.6	84.0	18.8	12.5	195.4	249.0	124.2	116.4	31.2	24.3	34.2	17.5
S2	605.2	9741.7	334.2	3469.2	31187.64	906.0	6178.0	3794.6	1672.8	4984.4	327.6	432.6	28696.4	5625.0	5720.8	4006.9				
S	24.6	98.7	18.3	58.9	176.6	30.1	78.6	61.6	40.9	70.6	18.1	20.8	169.4	75.0	72.6	63.3				
SE	5.6	22.1	4.1	13.2	40.5	6.7	17.6	13.8	9.4	15.8	4.0	4.7	38.9	16.8	16.9	14.2				

WC=Wet Control WT=Wet Treatment DC=Dry Control DT=Dry Treatment

APPENDIX B

GRASS AND FORB COVERAGE
DATA TABLES

Table B-1. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1985.

a. Wet Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cirsium vulgare	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	39	97.5	0	0	0	0	0	0	0	0	1	2.5	0	0	0	0	1.6
Digitalis purpurea	39	97.5	0	0	0	0	0	0	0	0	1	2.5	0	0	0	0	1.6
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	38	95.0	0	0	1	2.5	0	0	0	0	0	0	1	2.5	0	0	2.2
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	20	50.0	7	17.5	7	17.5	3	7.5	2	5.0	1	2.5	0	0	0	0	5.1
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	35	87.5	5	12.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	33	82.5	1	2.5	5	12.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Saxifraga integrifolia	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	34	85.0	0	0	3	7.5	2	5.0	1	2.5	0	0	0	0	0	0	1.9
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	28	70.0	9	22.5	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-1. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1985.

b. Wet Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	27	67.5	9	22.5	3	7.5	0	0	1	2.5	0	0	0	0	0	0	1.0
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.2
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-1. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1985.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	34	85.0	4	10.0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Chrysanthemum leucanthemum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cirsium vulgare	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	22	55.0	2	5.0	12	30.0	4	10.0	0	0	0	0	0	0	0	0	2.4
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	1	2.5	1	2.5	2	5.0	7	17.5	6	15.0	8	20.0	15	37.5	0	0	53.0
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	33	82.5	6	15.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	29	72.5	5	12.5	6	15.0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	34	85.0	3	7.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Smilacina sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Veronica arvensis	33	82.5	2	5.0	2	5.0	3	7.5	0	0	0	0	0	0	0	0	1.3
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	25	62.5	13	32.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-1. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1985.

d. Dry Treatment Span

TAXON	COVER CLASS 0 #	0 %	+ #	+ %	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	TOTAL PERCENT COVERAGE
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	28	70.0	10	25.0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	36	90.0	3	7.5	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	35	87.5	4	10.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-2. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1985.

a. Wet Control Span

TAXON	COVER CLASS 0 #	0 %	+ #	+ %	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	TOTAL PERCENT COVERAGE
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	33	82.5	2	5.0	2	5.0	3	7.5	0	0	0	0	0	0	0	0	1.3
Cirsium vulgare	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Clematis sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Digitalis purpurea	33	82.5	0	0	4	10.0	1	2.5	2	5.0	0	0	0	0	0	0	2.6
Epilobium angustifolium	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	38	95.0	0	0	1	2.5	0	0	0	0	1	2.5	0	0	0	0	1.7
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	20	50.0	6	15.0	7	17.5	2	5.0	1	2.5	2	5.0	2	5.0	0	0	9.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	37	92.5	0	0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	38	95.0	0	0	0	0	0	0	2	5.0	0	0	0	0	0	0	1.9
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	36	90.0	0	0	1	2.5	1	2.5	1	2.5	0	0	1	2.5	0	0	3.5
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-2. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1985.

b. Wet Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	28	70.0	2	5.0	6	15.0	3	7.5	1	2.5	0	0	0	0	0	0	2.5
Cirsium vulgare	30	75.0	2	5.0	6	15.0	2	5.0	0	0	0	0	0	0	0	0	1.2
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	35	87.5	2	5.0	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	34	85.0	0	0	3	7.5	2	5.0	0	0	0	0	0	0	1	2.5	3.4
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	36	90.0	0	0	3	7.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	0	0	0	0	7	17.5	10	25.0	11	27.5	9	22.5	2	5.0	1	2.5	35.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	1	2.5	3	7.5	16	40.0	17	42.5	2	5.0	1	2.5	0	0	0	0	11.1
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	31	77.5	1	2.5	5	12.5	3	7.5	0	0	0	0	0	0	0	0	1.5
Prunella vulgaris	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Satureja douglasii	35	87.5	3	7.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	39	97.5	0	0	0	0	0	0	1	2.5	0	0	0	0	0	0	1.0
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	35	87.5	3	7.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-2. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1985.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	1	2.5	0	0	7	17.5	6	15.0	6	15.0	3	7.5	12	30.0	50	12.5	38.7
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	32	80.0	6	15.0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	24	60.0	2	5.0	12	30.0	2	5.0	0	0	0	0	0	0	0	0	1.7
Geranium sp.	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Gramineae	1	2.5	0	0	7	17.5	6	15.0	6	15.0	3	7.5	12	30.0	5	12.5	51.0
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	26	65.0	7	17.5	6	15.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	27	67.5	3	7.5	8	20.0	2	5.0	0	0	0	0	0	0	0	0	1.4
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	37	92.5	0	0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	33	82.5	0	0	5	12.5	2	5.0	0	0	0	0	0	0	0	0	1.1
Viola glabella	36	90.0	1	2.5	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-2. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1985.

d. Dry Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Anaphalis margaritacea	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	37	92.5	1	2.5	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	31	77.5	1	2.5	6	15.0	2	5.0	0	0	0	0	0	0	0	0	1.2
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	30	75.0	0	0	6	15.0	4	10.0	0	0	0	0	0	0	0	0	2.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	2	5.0	2	5.0	13	32.5	15	37.5	8	20.0	0	0	0	0	0	0	14.2
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	36	90.0	1	2.5	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	34	85.0	0	0	5	12.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	15	37.5	5	12.5	16	40.0	4	10.0	0	0	0	0	0	0	0	0	2.7
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	26	65.0	3	7.5	8	20.0	3	7.5	0	0	0	0	0	0	0	0	1.7
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	32	80.0	1	2.5	5	12.5	1	2.5	1	2.5	0	0	0	0	0	0	1.7
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	35	87.5	3	7.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	36	90.0	2	5.0	1	2.5	0	0	1	2.5	0	0	0	0	0	0	1.0
Viola glabella	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-3. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1986.

a. Wet Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	33	82.5	3	7.5	4	10.0	0	0	0	0	0	0	0	0	0	0	1.0
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	34	85.0	0	0	3	7.5	3	7.5	0	0	0	0	0	0	0	0	1.4
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	39	97.5	0	0	0	0	0	0	1	2.5	0	0	0	0	0	0	1.0
Digitalis purpurea	37	92.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	26	65.0	0	0	7	17.5	4	10.0	2	5.0	1	2.5	0	0	0	0	5.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	38	95.0	0	0	0	0	2	5.0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	34	85.0	0	0	3	7.5	2	5.0	1	2.5	0	0	0	0	0	0	2.0
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	36	90.0	2	5.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0

Table B-3. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1986.

b. Wet Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	26	65.0	2	5.0	7	17.5	5	12.5	0	0	0	0	0	0	0	0	2.4
Cirsium vulgare	33	82.5	0	0	5	12.5	1	2.5	1	2.5	0	0	0	0	0	0	1.7
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	37	92.5	0	0	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	31	77.5	1	2.5	8	20.0	0	0	0	0	0	0	0	0	0	0	1.0
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	0	0	0	0	4	10.0	7	17.5	9	22.5	7	17.5	9	22.5	4	10.0	51.8
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	4	10.0	6	15.0	16	40.0	11	27.5	2	5.0	1	2.5	0	0	0	0	8.9
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	31	77.5	2	5.0	3	7.5	3	7.5	1	2.5	0	0	0	0	0	0	2.3
Prunella vulgaris	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	35	87.5	0	0	2	5.0	2	5.0	1	2.5	0	0	0	0	0	0	1.9
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-3. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1986.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	23	57.5	6	15.0	10	25.0	1	2.5	0	0	0	0	0	0	0	0	1.1
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	9	22.5	3	7.5	14	35.0	14	35.0	0	0	0	0	0	0	0	0	6.3
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	1	2.5	0	0	4	10.0	18	45.0	7	17.5	5	12.5	5	12.5	0	0	32.5
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	22	55.0	3	7.5	14	35.0	1	2.5	0	0	0	0	0	0	0	0	1.4
Prunella vulgaris	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	34	85.0	2	5.0	4	10.0	0	0	0	0	0	0	0	0	0	0	1.0
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	24	60.0	2	5.0	8	20.0	6	15.0	0	0	0	0	0	0	0	0	2.9
Viola glabella	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	31	77.5	8	20.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-3. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1986.

d. Dry Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	36	90.0	2	5.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	24	60.0	0	0	6	15.0	8	20.0	2	5.0	0	0	0	0	0	0	5.4
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	26	65.0	1	2.5	9	22.5	4	10.0	0	0	0	0	0	0	0	0	2.2
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	2	5.0	1	2.5	5	12.5	14	35.0	10	25.0	5	12.5	3	7.5	0	0	29.8
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	36	90.0	0	0	3	7.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	36	90.0	1	2.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	27	67.5	9	22.5	3	7.5	0	0	1	2.5	0	0	0	0	0	0	1.2
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	31	77.5	0	0	5	12.5	4	10.0	0	0	0	0	0	0	0	0	1.9
Prunella vulgaris	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	20	50.0	3	7.5	6	15.0	9	22.5	2	5.0	0	0	0	0	0	0	5.8
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	38	95.0	1	2.5	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	36	90.0	1	2.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	36	90.0	4	10.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-4. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1986.

a. Wet Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	31	77.5	3	7.5	4	10.0	0	0	2	5.0	0	0	0	0	0	0	2.3
Cirsium vulgare	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	37	92.5	3	7.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Equisetum sp.	17	85.0	0	0	2	5.0	0	0	0	0	0	0	0	0	1	2.5	2.6
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	4	10.0	6	15.0	5	12.5	3	7.5	1	2.5	1	2.5	1	2.5	1	2.5	8.7
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	36	90.0	0	0	1	2.5	0	0	1	2.5	1	2.5	1	2.5	0	0	4.8
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-4. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1986.

b. Wet Treatment Span

TAXON	COVER CLASS 0 #	0 %	+ #	+ %	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	TOTAL PERCENT COVERAGE
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	34	85.0	1	2.5	4	10.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	16	80.0	0	0	2	5.0	1	2.5	1	2.5	0	0	0	0	0	0	1.0
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	2	05.0	0	0	3	7.5	7	17.5	7	17.5	5	12.5	10	25.0	6	15.0	53.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	38	95.0	2	5.0	9	22.5	12	30.0	5	12.5	6	15.0	2	5.0	2	5.0	28.8
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	29	27.5	1	2.5	5	12.5	2	5.0	3	7.5	0	0	0	0	0	0	4.1
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-4. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1986.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	23	57.5	9	22.5	6	15.0	2	5.0	0	0	0	0	0	0	0	0	1.2
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	37	92.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	37	92.5	3	7.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	12	30.0	9	22.5	11	27.5	7	17.5	1	2.5	0	0	0	0	0	0	4.4
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	1	2.5	7	17.5	10	25.0	11	27.5	8	20.0	1	2.5	2	5.0	0	0	18.5
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	35	87.5	4	10.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	13	32.5	18	45.0	8	20.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	29	72.5	7	17.5	3	7.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	29	35.0	1	2.5	6	15.0	2	5.0	2	5.0	0	0	0	0	0	0	3.2
Viola glabella	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-4. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1986.

d. Dry Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	35	87.5	1	2.5	3	7.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	36	90.0	1	2.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	22	45.0	1	2.5	13	32.5	4	10.0	0	0	0	0	0	0	0	0	2.5
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	2	05.0	1	2.5	5	12.5	11	27.5	7	17.5	4	10.0	5	12.5	5	12.5	40.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	39	97.5	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	30	75.0	3	7.5	7	17.5	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	33	82.5	2	5.0	4	10.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	15	37.5	7	17.5	11	27.5	6	15.0	1	2.5	0	0	0	0	0	0	4.1
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	37	92.5	0	0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-5. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1987.

a. Wet Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	30	75.0	3	7.5	5	12.5	2	5.0	0	0	0	0	0	0	0	0	1.1
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	38	95.0	1	2.5	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Dicentra formosa	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Digitalis purpurea	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	37	92.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	25	62.5	6	15.0	4	10.0	3	7.5	1	2.5	0	0	0	0	0	0	2.4
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	32	80.0	0	0	3	7.5	2	5.0	2	5.0	1	2.5	0	0	0	0	4.4
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	35	87.5	5	12.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-5. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1987.

b. Wet Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	30	75.0	4	10.0	5	12.5	1	2.5	0	0	0	0	0	0	0	0	2.5
Cirsium vulgare	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	38	95.0	2	5.0	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Equisetum sp.	29	72.5	4	10.0	7	17.5	0	0	0	0	0	0	0	0	0	0	3.1
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	1	2.5	0	0	1	2.5	6	15.0	5	12.5	6	15.0	6	15.0	15	37.5	65.7
Hieracium albertinum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	13	32.5	2	5.0	9	22.5	12	30.0	2	5.0	0	0	2	5.0	0	0	11.3
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	34	85.0	3	7.5	3	7.5	0	0	0	0	0	0	0	0	0	0	1.3
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	37	92.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	34	85.0	5	12.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-5. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1987.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	23	57.5	4	10.0	9	22.5	4	10.0	0	0	0	0	0	0	0	0	2.3
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	11	27.5	4	10.0	17	42.5	6	15.0	2	5.0	0	0	0	0	0	0	5.5
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	6	15.0	1	2.5	5	12.5	16	40.0	4	10.0	6	15.0	1	2.5	1	2.5	24.1
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	32	80.0	1	2.5	6	15.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	34	85.0	3	7.5	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	27	67.5	5	12.5	8	20.0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	32	80.0	0	0	3	7.5	4	10.0	0	0	0	0	1	2.5	0	0	3.9
Veronica officinalis	30	75.0	1	2.5	3	7.5	5	12.5	1	2.5	0	0	0	0	0	0	3.1
Viola glabella	33	82.5	0	0	5	12.5	2	5.0	0	0	0	0	0	0	0	0	1.1
Miscellaneous forbs	32	80.0	4	10.0	4	10.0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-5. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in April 1987.

d. Dry Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	37	92.5	0	0	1	2.5	0	0	1	2.5	0	0	1	2.5	0	0	3.1
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	33	82.5	4	10.0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	26	65.0	1	2.5	8	20.0	5	12.5	0	0	0	0	0	0	0	0	2.5
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	2	05.0	0	0	5	12.5	6	15.0	4	10.0	5	12.5	8	20.0	10	25.0	55.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	31	77.5	5	12.5	4	10.0	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	34	85.0	1	2.5	5	12.5	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	23	57.5	3	7.5	11	27.5	3	7.5	0	0	0	0	0	0	0	0	2.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Veronica officinalis	38	95.0	0	0	0	0	2	5.0	0	0	0	0	0	0	0	0	1.0
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	27	67.5	10	25.0	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-6. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1987.

a. Wet Control Span

TAXON	COVER CLASS 0 #	0 %	+ #	+ %	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	TOTAL PERCENT COVERAGE
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	30	75.0	1	2.5	3	7.5	6	15.0	0	0	0	0	0	0	0	0	2.5
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	37	92.5	0	0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Equisetum sp.	38	95.0	0	0	0	0	0	0	1	2.5	0	0	1	2.5	0	0	3.1
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	19	47.5	11	27.5	6	15.0	3	7.5	0	0	0	0	0	0	1	2.5	4.3
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	35	87.5	2	5.0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	36	90.0	3	7.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0

Table B-6. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1987.

b. Wet Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	35	87.5	3	7.5	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	38	95.0	1	2.5	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	37	92.5	1	2.5	1	2.5	0	0	1	2.5	0	0	0	0	0	0	1.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	1	2.5	0	0	5	12.5	7	17.5	5	12.5	13	32.5	2	5.0	7	17.5	29.5
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	4	10.0	2	5.0	4	10.0	10	25.0	12	30.0	5	12.5	3	7.5	0	0	29.5
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	34	85.0	1	2.5	4	10.0	0	0	1	2.5	0	0	0	0	0	0	1.3
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-6. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1987.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	16	40.0	9	22.5	10	25.0	4	10.0	1	2.5	0	0	0	0	0	0	3.4
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	10	25.0	4	10.0	13	32.5	13	32.5	0	0	0	0	0	0	0	0	6.0
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	0	0.0	5	12.5	2	5.0	10	25.0	12	30.0	9	22.5	1	2.5	1	2.5	33.9
Hieracium albertinum	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	31	77.5	5	12.5	3	7.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	35	87.5	0	0	5	12.5	0	0	0	0	0	0	0	0	0	0	1.0
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	31	77.5	2	5.0	4	10.0	3	7.5	0	0	0	0	0	0	0	0	1.5
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	30	75.0	0	0	4	10.0	5	12.5	1	2.5	0	0	0	0	0	0	3.1
Viola glabella	34	85.0	3	7.5	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-6. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in September 1987.

d. Dry Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	38	95.0	0	0	0	0	2	5.0	0	0	0	0	0	0	0	0	1.0
Anaphalis margaritacea	39	97.5	0	0	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Antennaria neglecta	36	90.0	1	2.5	3	7.5	0	0	0	0	0	0	0	0	0	0	1.0
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	33	82.5	3	7.5	2	5.0	2	5.0	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	14	35.0	7	17.5	5	12.5	11	27.5	3	7.5	0	0	0	0	0	0	7.5
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	0	0.0	1	2.5	2	5.0	6	15.0	6	15.0	7	17.5	10	25.0	8	20.0	59.7
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	35	87.5	3	7.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	35	87.5	1	2.5	2	5.0	2	5.0	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-7. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in August 1988.

a. Wet Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	38	95.0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	38	95.0	0	0	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	38	95.0	0	0	0	0	1	2.5	1	2.5	0	0	0	0	0	0	1.3
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	33	82.5	3	7.5	1	2.5	1	2.5	0	0	1	2.5	1	2.5	0	0	4.6
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	33	82.5	2	5.0	1	2.5	1	2.5	1	2.5	2	5.0	0	0	0	0	4.2
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-7. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in August 1988.

b. Wet Treatment Span

TAXON	COVER CLASS 0 #	0 %	+ #	+ %	1 #	1 %	2 #	2 %	3 #	3 %	4 #	4 %	5 #	5 %	6 #	6 %	TOTAL PERCENT COVERAGE
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	34	85.0	0	0	4	10.0	1	2.5	1	2.5	0	0	0	0	0	0	1.6
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	2	5.0	1	2.5	4	10.0	7	17.5	5	12.5	4	10.0	9	22.5	8	20.0	52.7
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	1	2.5	1	2.5	9	22.5	7	17.5	10	25.0	3	7.5	5	12.5	4	10.0	38.0
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	38	95.0	1	2.5	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Viola glabella	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table B-7. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in August 1988.

c. Dry Control Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	27	67.5	10	25.0	2	5.0	1	2.5	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	39	97.5	0	0	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	27	67.5	7	17.5	3	7.5	3	7.5	0	0	0	0	0	0	0	0	1.5
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	3	7.5	3	7.5	8	20.0	12	3.0	4	10.0	7	17.5	3	7.5	0	0	26.4
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	38	95.0	1	2.5	0	0	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypericum perforatum	27	67.5	9	22.5	3	7.5	1	2.5	0	0	0	0	0	0	0	0	1.0
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maianthemum dilatatum	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Plantago lanceolata	25	62.5	7	17.5	5	12.5	3	7.5	0	0	0	0	0	0	0	0	1.7
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	37	92.5	3	7.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	36	90.0	3	7.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	19	47.5	4	10.0	6	15.0	9	22.5	2	5.0	0	0	0	0	0	0	5.8
Viola glabella	37	92.5	1	2.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0
Miscellaneous forbs	35	87.5	3	7.5	2	5.0	0	0	0	0	0	0	0	0	0	0	1.0

Table B-7. Frequency of occurrence (# plots) by cover class and total percent coverage of non-woody plant taxa in August 1988.

d. Dry Treatment Span

TAXON	COVER CLASS 0		+		1		2		3		4		5		6		TOTAL PERCENT COVERAGE
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	
Achillea millefolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Anaphalis margaritacea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Antennaria neglecta	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Arabidopsis thaliana	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Artemisia suksdorfii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Barbarea orthoceras	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine oligosperma	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cardamine pratensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Carex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Centaurium umbellatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cerastium nutans	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Chrysanthemum leucanthemum	38	95.0	1	2.5	1	2.5	0	0	0	0	0	0	0	0	0	0	1.0
Cirsium vulgare	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clematis sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Clintonia uniflora	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cornus canadensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crepis capillaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Dicentra formosa	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Digitalis purpurea	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium angustifolium	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Epilobium minutum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Equisetum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Erigeron sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Fragaria virginiana	12	30.0	9	22.5	11	27.5	8	20.0	0	0	0	0	0	0	0	0	4.1
Geranium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Gramineae	0	0	3	7.5	1	2.5	7	7.5	4	10.0	9	22.5	5	12.5	11	27.5	58.3
Hieracium albertinum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hieracium sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypericum perforatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hypochaeris radicata	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Juncus spp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Leptarrhena pyrolifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Lotus corniculatus	37	92.5	3	7.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Maianthemum dilatatum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Medicago lupulina	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Microsteris gracilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Montia sibirica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Plantago lanceolata	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Prunella vulgaris	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pyrola sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus macounii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ranunculus muricatus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex acetosa	37	92.5	3	7.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Rumex obtusifolius	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rumex sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sagina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Satureja douglasii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga debilis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Saxifraga integrifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Smilacina sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Taraxacum sp.	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tolmiea menziesii	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trientalis latifolia	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium fragiferum	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Trifolium repens	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0
Urtica dioica	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Verbascum thapsus	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica arvensis	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Veronica officinalis	34	85.0	2	5.0	2	5.0	2	5.0	0	0	0	0	0	0	0	0	1.0
Viola glabella	40	100.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Miscellaneous forbs	39	97.5	1	2.5	0	0	0	0	0	0	0	0	0	0	0	0	1.0

APPENDIX C

SHRUB COVERAGE
DATA TABLES

Table C.1. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1985.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	4	2.00	4.10	0-10
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	7	7.75	14.00	0-45
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	1	0.25	1.12	0-5
Rosa gymnocarpa	1	0.10	0.45	0-2
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	16	10.05	17.50	0-60
Rubus spectabilis	14	17.50	21.73	0-80
Rubus ursinus	10	2.80	3.40	0-10
Sambucus racemosa	1	1.00	4.47	0-20
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.1. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1985.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	3	0.15	0.37	0-<1
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	3	0.35	1.14	0-5
Rubus spectabilis	4	0.20	0.41	0-<1
Rubus ursinus	0	-	-	-
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.1. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1985.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	0.50	2.24	0-10
Amelanchier alnifolia	1	0.50	2.24	0-10
Berberis nervosa	4	2.00	5.71	0-25
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	5	4.25	10.04	0-40
Holodiscus discolor	0	-	-	-
Lonicera involucrata	1	0.75	3.35	0-15
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	1	0.25	1.12	0-5
Rubus spectabilis	0	-	-	-
Rubus ursinus	14	7.65	14.20	0-60
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	1	0.25	1.12	0-5

Table C.1. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1985.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	2	0.10	0.31	0-<1
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	4	0.25	1.12	0-5
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	1	0.05	0.22	0-<1
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	0	-	-	-
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.2. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1985.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	2	0.50	1.54	0-5
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	5	11.25	24.05	0-80
Holodiscus discolor	1	1.25	5.59	0-25
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	1	0.75	3.35	0-15
Rubus sp.	1	2.00	8.94	0-40
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	19	26.50	21.71	0-70
Rubus spectabilis	16	34.69	28.55	0-90
Rubus ursinus	18	13.00	10.81	0-40
Sambucus racemosa	1	0.25	1.12	0-5
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.2. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1985.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	0	-	-	-
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	1	1.00	4.47	0-20
Rubus laciniatus	0	-	-	-
Rubus parviflorus	20	11.25	9.01	0-40
Rubus spectabilis	7	1.75	2.45	0-5
Rubus ursinus	14	7.00	7.50	0-25
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.2. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1985.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	1	0.25	1.12	0-5
Berberis nervosa	4	1.50	3.66	0-15
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	3	4.00	10.46	0-40
Holodiscus discolor	0	-	-	-
Lonicera involucrata	1	0.75	3.35	0-15
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	2	3.25	13.40	0-60
Rubus spectabilis	0	-	-	-
Rubus ursinus	18	22.75	23.70	0-80
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	1	0.25	1.12	0-5
Vaccinium sp.	0	-	-	-

Table C.2. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1985.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	1	0.25	1.12	0-5
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	1	0.25	1.12	0-5
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	1	0.25	1.12	0-5
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	14	4.50	3.59	0-10
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.3. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1986.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	4			
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	7	9.25	17.72	0-60
Holodiscus discolor	1	2.00	8.94	0-40
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	1	0.50	2.24	0-10
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	18	14.75	17.05	0-60
Rubus spectabilis	15	23.50	28.15	0-75
Rubus ursinus	8	2.10	3.73	0-15
Sambucus racemosa	1	0.50	2.24	0-10
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.3. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1986.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	1	0.25	1.12	0-5
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	0	-	-	-
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	16	5.75	6.34	0-30
Rubus spectabilis	7	3.00	5.48	0-20
Rubus ursinus	14	6.25	7.23	0-30
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.3. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1986.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	0.50	2.24	0-10
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	5	3.75	8.56	0-25
Corylus cornuta	2	0.50	1.54	0-5
Cytisus scoparius	1	0.50	2.24	0-10
Gaultheria shallon	8	8.50	14.61	0-55
Holodiscus discolor	1	0.25	1.12	0-5
Lonicera involucrata	2	1.00	3.48	0-15
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	1	0.10	0.45	0-2
Rubus spectabilis	0	-	-	-
Rubus ursinus	9	3.00	4.70	0-20
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	1	0.50	2.24	0-10

Table C.3. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1986.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	0.25	1.12	0-5
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	0	-	-	-
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	12	3.85	4.17	0-15
Sambucus racemosa	1	0.25	1.12	0-<5
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.4. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1986.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	0.25	1.12	0-5
Amelanchier alnifolia	1	0.25	1.12	0-5
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	5	9.25	18.44	0-60
Holodiscus discolor	1	1.00	4.47	0-20
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	19	30.00	23.25	0-80
Rubus spectabilis	15	33.15	32.83	0-95
Rubus ursinus	17	11.10	11.17	0-40
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.4. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1986.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	1	0.70	1.71	0-5
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	2	0.30	0.92	0-3
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	1	2.40	7.63	0-30
Rubus laciniatus	0	-	-	-
Rubus parviflorus	17	8.30	11.94	0-50
Rubus spectabilis	7	2.35	5.62	0-25
Rubus ursinus	10	7.55	13.08	0-50
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.4. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1986.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	0.15	0.67	0-3
Amelanchier alnifolia	1	0.15	0.67	0-3
Berberis nervosa	5	2.80	8.91	0-40
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	2.00	8.94	0-40
Gaultheria shallon	8	12.05	22.52	0-80
Holodiscus discolor	1	0.25	1.11	0-5
Lonicera involucrata	2	0.65	2.30	0-10
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	16	17.30	17.66	0-60
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	1	1.00	4.47	0-20

Table C.4. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1986.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	0.15	0.67	0-3
Gaultheria shallon	1	0.15	0.67	0-3
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	17	10.05	11.56	0-40
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.5. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1987.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	5	2.50	4.44	0-10
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	6	12.00	23.75	0-80
Holodiscus discolor	1	1.50	6.71	0-30
Lonicera involucrata	0	-	-	-
Ribes lacustre	1	0.25	1.12	0-10
Rosa gymnocarpa	1	0.50	2.24	0-10
Rubus sp.	0	-	-	-
Rubus discolor	1	0.50	2.24	0-10
Rubus laciniatus	0	-	-	-
Rubus parviflorus	18	14.25	13.21	0-60
Rubus spectabilis	14	24.00	25.83	0-70
Rubus ursinus	8	3.25	5.20	0-10
Sambucus racemosa	1	0.50	2.24	0-10
Spirea douglasii	2	1.00	3.08	0-10
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.5. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1987.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	1	0.25	1.12	0-10
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	2	0.50	1.54	0-10
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	2	1.00	3.08	0-10
Rubus laciniatus	0	-	-	-
Rubus parviflorus	17	10.50	13.27	0-60
Rubus spectabilis	5	3.50	9.19	0-40
Rubus ursinus	12	5.50	5.60	0-20
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.5. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1987.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	1	0.50	2.24	0-10
Berberis nervosa	6	3.50	5.87	0-20
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	1.50	6.71	0-30
Gaultheria shallon	6	11.75	23.13	0-80
Holodiscus discolor	0	-	-	-
Lonicera involucrata	2	1.50	4.89	0-20
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	13	7.75	10.32	0-40
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	1	0.25	1.12	0-10

Table C.5. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in April 1987.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	1.00	4.47	0-20
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	1.30	4.12	0-10
Gaultheria shallon	1	0.25	1.12	0-10
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	1	0.25	1.12	0-10
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	15	7.00	5.94	0-20
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.6. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1987.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	1.00	4.47	0-20
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	7	15.50	26.40	0-90
Holodiscus discolor	2	2.00	6.96	0-30
Lonicera involucrata	0	-	-	-
Ribes lacustre	1	0.25	1.12	0-5
Rosa gymnocarpa	1	0.03	0.11	0-<1
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	1	1.25	5.59	0-25
Rubus parviflorus	16	27.00	25.36	0-90
Rubus spectabilis	11	18.25	25.46	0-90
Rubus ursinus	11	7.00	11.85	0-50
Sambucus racemosa	1	0.25	1.12	0-5
Spirea douglasii	1	0.25	1.12	0-5
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.6. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1987.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	1	0.05	0.22	0-<1
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	1	0.05	0.22	0-<1
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	12	9.30	15.55	0-65
Rubus spectabilis	9	6.35	9.88	0-35
Rubus ursinus	10	9.00	11.88	0-35
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.6. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1987.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	4	3.00	8.34	0-35
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	4.00	17.89	0-80
Gaultheria shallon	6	14.50	25.44	0-80
Holodiscus discolor	0	-	-	-
Lonicera involucrata	1	1.00	4.47	0-20
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	2	1.50	4.62	0-15
Rubus ursinus	19	16.53	21.32	0-75
Sambucus racemosa	0	-	-	-
Spirea douglasii	1	0.50	2.24	0-10
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.6. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in September 1987.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	1.00	4.47	0-20
Gaultheria shallon	1	0.50	2.24	0-10
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	1	0.25	1.12	0-5
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	1	0.03	0.11	0-<1
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	15	16.30	18.65	0-60
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.7. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in August 1988.

a. Wet Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	1	0.25	1.12	0-5
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	6	12.50	24.74	0-80
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	1	0.75	3.35	0-15
Rosa gymnocarpa	1	0.10	0.45	0-2
Rubus sp.	0	-	-	-
Rubus discolor	2	0.75	2.45	0-10
Rubus laciniatus	0	-	-	-
Rubus parviflorus	18	20.00	17.55	0-60
Rubus spectabilis	13	29.75	31.43	0-80
Rubus ursinus	13	2.93	2.89	0-10
Sambucus racemosa	0	-	-	-
Spirea douglasii	3	0.15	0.46	0-2
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.7. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in August 1988.

b. Wet Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	1	0.25	1.12	0-5
Corylus cornuta	0	-	-	-
Cytisus scoparius	0	-	-	-
Gaultheria shallon	0	-	-	-
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	3	2.75	7.52	0-30
Rubus laciniatus	0	-	-	-
Rubus parviflorus	13	9.93	13.20	0-40
Rubus spectabilis	2	0.75	2.45	0-10
Rubus ursinus	13	6.28	7.91	0-30
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.7. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in August 1988.

c. Dry Control Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	6	2.08	4.95	0-20
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	4.90	21.91	0-98
Gaultheria shallon	8	9.88	18.61	0-70
Holodiscus discolor	0	-	-	-
Lonicera involucrata	2	1.50	5.64	0-25
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	0	-	-	-
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	18	16.44	19.11	0-75
Sambucus racemosa	0	-	-	-
Spirea douglasii	1	0.25	1.12	0-5
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

Table C.7. Frequency of occurrence (# plots) and mean percent cover of shrub taxa in August 1988.

d. Dry Treatment Span

Taxon	# Plots Present	Mean % Cover	SD	Range (%)
Acer circinatum	0	-	-	-
Amelanchier alnifolia	0	-	-	-
Berberis nervosa	0	-	-	-
Corylus cornuta	0	-	-	-
Cytisus scoparius	1	1.00	4.47	0-20
Gaultheria shallon	1	0.25	1.12	0-5
Holodiscus discolor	0	-	-	-
Lonicera involucrata	0	-	-	-
Ribes lacustre	0	-	-	-
Rosa gymnocarpa	0	-	-	-
Rubus sp.	0	-	-	-
Rubus discolor	0	-	-	-
Rubus laciniatus	1	0.05	0.22	0-1
Rubus parviflorus	0	-	-	-
Rubus spectabilis	0	-	-	-
Rubus ursinus	16	8.60	10.77	0-30
Sambucus racemosa	0	-	-	-
Spirea douglasii	0	-	-	-
Symphoricarpos albus	0	-	-	-
Vaccinium sp.	0	-	-	-

APPENDIX D

TREE SEEDLING DENSITY AND HEIGHT DATA TABLES

Table D-1 Mean density and mean height of tree seedlings in April 1985.

a. Wet Control

Taxon	# Plots Present	Stems per plot Mean	SD	Height (ft) Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	8	4.63	4.10	3.24 (37)	1.23
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	2	0.10	0.31	7.00 (2)	4.24
Tsuga heterophylla	1	0.10	0.45	1.75 (2)	1.77

b. Wet Treatment

Taxon	# Plots Present	Stems per plot Mean	SD	Height (ft) Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	3	0.20	0.52	2.75 (4)	0.96
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	1	0.05	0.22	1.00 (1)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	1	0.05	0.22	2.00 (1)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-1 Mean density and mean height of tree seedlings in April 1985.

c. Dry Control

Taxon	# Plots Present	Stems per plot		Height (ft)	
		Mean	SD	Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	2	0.20	0.70	2.00 (4)	0.82
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	6	1.20	1.88	1.56 (18)	0.97
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	1	0.10	0.45	1.00 (2)	0.00
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	1.00 (1)	-

d. Dry Treatment

Taxon	# Plots Present	Stems per plot		Height (ft)	
		Mean	SD	Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	4	0.35	0.81	1.06 (7)	0.42
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	0	0	-	- (1)	-
Tsuga heterophylla	1	0.05	0.22	1.00 (1)	-

Table D-2 Mean density and mean height of tree seedlings in September 1985.

a. Wet Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.05	0.22	9.84 (1)	-
Alnus rubra	8	1.65	3.01	6.96 (33)	2.25
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	2	0.10	0.31	7.88 (2)	5.10
Tsuga heterophylla	2	0.15	0.49	1.91 (3)	1.47

b. Wet Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	4	0.20	0.41	3.63 (4)	1.29
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-2 Mean density and mean height of tree seedlings in September 1985.

c. Dry Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.05	0.22	4.27 (1)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	4	0.35	0.81	2.67 (7)	1.39
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	2.89 (1)	-

d. Dry Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.05	0.22	1.57 (1)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	1	0.05	0.22	0.85 (1)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-3 Mean density and mean height of tree seedlings in April 1986.

a. Wet Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.05	0.22	11.00 (1)	-
Alnus rubra	7	1.35	2.48	7.04 (27)	1.91
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	2	0.10	0.31	8.50 (2)	4.95
Tsuga heterophylla	1	0.05	0.22	4.00 (1)	-

b. Wet Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	4	0.20	0.41	3.00 (4)	1.15
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-3 Mean density and mean height of tree seedlings in April 1986.

c. Dry Control

Taxon	# Plots Present	Stems per plot Mean	SD	Height (ft) Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	1	0.05	0.22	2.00 (1)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	11	0.90	1.12	2.44 (18)	1.20
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	2	0.10	0.31	2.00 (2)	0.00
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	3.00 (1)	-

d. Dry Treatment

Taxon	# Plots Present	Stems per plot Mean	SD	Height (ft) Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	2	0.10	0.31	1.00 (2)	0.00
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-4 Mean density and mean height of tree seedlings in September 1986.

a. Wet Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.05	0.22	14.00 (1)	-
Alnus rubra	8	1.80	3.28	12.02 (36)	4.59
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	2	0.10	0.31	8.00 (2)	2.82
Tsuga heterophylla	2	0.10	0.31	2.66 (3)	2.88

b. Wet Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	3	0.15	0.36	8.00 (3)	1.00
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	3	0.70	2.15	0.64 (14)	0.23
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-4 Mean density and mean height of tree seedlings in September 1986.

c. Dry Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.05	0.22	4.00 (1)	0.00
Alnus rubra	2	0.10	0.31	3.50 (2)	0.70
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	10	0.70	0.92	2.53 (15)	1.45
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	2	0.15	0.48	1.33 (3)	0.57
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	3.00 (1)	0.00

d. Dry Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	1	0.05	0.22	1.00 (1)	0.00
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-5 Mean density and mean height of tree seedlings in April 1987.

a. Wet Control

Taxon	# Plots Present	Stems per plot		Height (ft)	
		Mean	SD	Mean (n)	SD
Acer macrophyllum	1	0.05	0.22	10.00 (1)	-
Alnus rubra	8	1.90	3.32	10.79 (38)	4.90
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	2	0.20	0.70	9.25 (4)	5.97
Tsuga heterophylla	3	0.20	0.52	2.88 (4)	2.10

b. Wet Treatment

Taxon	# Plots Present	Stems per plot		Height (ft)	
		Mean	SD	Mean (n)	SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	3	0.20	0.52	7.25 (4)	2.22
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	4	0.80	2.24	0.66 (16)	0.24
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	0.50 (1)	-

Table D-5 Mean density and mean height of tree seedlings in April 1987.

c. Dry Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	3	0.15	0.37	2.83 (3)	0.76
Populus trichocarpa	2	0.15	0.49	1.67 (3)	0.58
Pseudotsuga menziesii	11	0.80	0.83	2.75 (16)	1.21
Rhamnus purshiana	1	0.05	0.22	0.50 (1)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	4.00 (1)	-

d. Dry Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	3	0.15	0.37	1.17 (3)	0.29
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-6 Mean density and mean height of tree seedlings in September 1987.

a. Wet Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	4	0.40	1.14	5.88 (8)	0.35
Alnus rubra	10	2.05	2.89	19.22 (42)	6.89
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	1	0.05	0.22	12.00 (1)	-
Tsuga heterophylla	1	0.05	0.22	6.00 (1)	-

b. Wet Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	11	3.30	6.17	2.16 (67)	2.92
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	3	0.25	0.72	2.40 (5)	1.34
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-6 Mean density and mean height of tree seedlings in September 1987.

c. Dry Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	1	0.05	0.22	6.00 (1)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	11	0.90	1.12	3.83 (18)	1.47
Rhamnus purshiana	1	0.05	0.22	1.00 (1)	-
Salix sp.	2	0.20	0.70	2.50 (4)	0.58
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	5.00 (1)	-

d. Dry Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	1	0.05	0.22	3.00 (1)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	2	0.20	0.70	0.75 (4)	0.29
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-7 Mean density and mean height of tree seedlings in August 1988.

a. Wet Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	1	0.40	1.79	10.00 (1)	-
Alnus rubra	6	0.75	1.53	3.00 (15)	0.85
Populus trichocarpa	0	0	-	- (0)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	0	0	-	- (0)	-
Thuja plicata	1	0.05	0.22	2.00 (1)	-
Tsuga heterophylla	3	0.20	0.52	3.50 (4)	1.29

b. Wet Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	14	7.00	10.28	3.74 (140)	1.69
Populus trichocarpa	1	0.05	0.22	3.00 (1)	-
Pseudotsuga menziesii	0	0	-	- (0)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	5	0.60	1.60	2.17 (12)	1.03
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

Table D-7 Mean density and mean height of tree seedlings in August 1988.

c. Dry Control

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	0	0	-	- (0)	-
Populus trichocarpa	2	0.10	0.31	2.25 (2)	0.35
Pseudotsuga menziesii	9	0.85	1.31	4.25 (16)	2.04
Rhamnus purshiana	2	0.10	0.31	3.75 (2)	3.18
Salix sp.	1	0.05	0.22	2.00 (1)	-
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	1	0.05	0.22	5.80 (1)	-

d. Dry Treatment

Taxon	# Plots Present	Stems per plot Mean	Stems per plot SD	Height (ft) Mean (n)	Height (ft) SD
Acer macrophyllum	0	0	-	- (0)	-
Alnus rubra	1	0.05	0.22	0.50 (1)	-
Populus trichocarpa	2	0.25	0.91	0.90 (5)	0.22
Pseudotsuga menziesii	1	0.05	0.22	5.00 (1)	-
Rhamnus purshiana	0	0	-	- (0)	-
Salix sp.	1	0.15	0.67	2.00 (3)	0.00
Thuja plicata	0	0	-	- (0)	-
Tsuga heterophylla	0	0	-	- (0)	-

APPENDIX E

PHOTOGRAPHIC DOCUMENTATION
OF
RIGHT-OF-WAY VEGETATION CHANGES

Wet Control Span; August 1988

Wet Treatment Span; August 1988

Dry Control Span; August 1988

Dry Treatment Span; August 1988